

XTC-C200RDS

SERVICE MANUAL

AEP Model
UK Model



SPECIFICATIONS

Tuner section

FM

Tuning range	87.5 – 108.0 MHz
Antenna terminal	External antenna connector
Intermediate frequency	10.7 MHz
Usable sensitivity	8 dBf
Selectivity	75 dB at 400 kHz
Signal-to-noise ratio	65 dB (stereo); 68 dB (mono)
Harmonic distortion at 1 kHz	0.5 % (stereo); 0.3 % (mono)
Separation	35 dB at 1 kHz
Frequency response	30 – 15,000 Hz
Capture ratio	2 dB

MW/LW

Tuning range	MW: 531 – 1,602 kHz LW: 153 – 281 kHz
Antenna terminal	External antenna connector
Intermediate frequency	10.71 MHz/450 kHz
Sensitivity	MW: 30 µV LW: 50 µV

Power amplifier section

Outputs	Speaker outputs (sure seal connectors)
Speaker impedance	4 – 8 ohms
Maximum power output	35 W × 4 (at 4 ohms)

General

Output lead	Power antenna relay control lead
Tone controls	Bass ±8 dB at 100 Hz Treble ±8 dB at 10 kHz
Power requirements	12 V DC car battery (negative ground)
Dimensions	Approx. 188 × 58 × 176 mm (w/h/d)
Mounting dimensions	Approx. 182 × 53 × 155 mm (w/h/d)
Mass	Approx. 0.8 kg
Supplied accessories	Power connecting cord (1) Mounting hardware (1 set) Front panel case (1)

Design and specifications are subject to change without notice.

CHANGER CONTROL RECEIVER
SONY®

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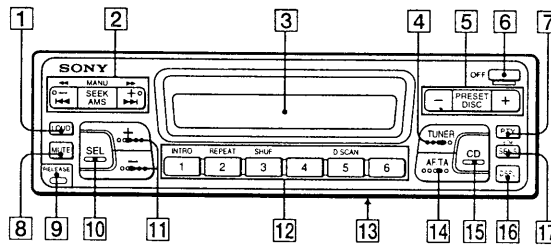
Notes on chip component replacement

- Never reuse a disconnected chip component.
- Notice that the minus side of a tantalum capacitor may be damaged by heat.

SECTION 1 GENERAL

This section is extracted from instruction manual.

Location of controls

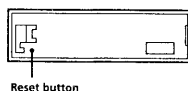


- 1 LOUD (loudness) button
- 2 SEEK/AMS • MANU button
- 3 Display window
- 4 TUNER (radio on/band select) button
- 5 PRESET/DISC button
- 6 OFF button
- 7 PTY (programme type) button
- 8 MUTE button
- 9 RELEASE (front panel release) button
- 10 SEL (control mode select) button
- 11 + - (volume/bass/treble/balance/fader control) buttons
- 12 During radio reception:
Preset number buttons
During CD playback:
1 INTRO button
2 REPEAT button
3 SHUF (shuffle) button
5 D.SCAN (disc scan) button
- 13 POWER SELECT switch (located on the bottom of the unit)
See "POWER SELECT Switch" in the Installation/Connections manual.
- 14 AF/TA (alternative frequency/traffic announcement) button
- 15 CD (disc play/CD changer select) button
- 16 DSPL (display mode change/time set) button
- 17 SENS/BTM (sensitivity adjust/best tuning memory function) button

Getting Started

Resetting the unit

Before operating the unit for the first time, or after replacing the car battery, you must reset the unit.
Press the reset button with a pointed object, such as a ball-point pen.

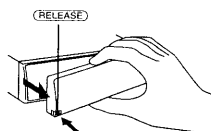


Note
Pressing the reset button will erase the memorized contents of all the memory functions.

Detaching the front panel

The front panel of this unit can be detached in order to prevent the unit from being stolen.

- 1 Press **(OFF)**.
- 2 Press **(RELEASE)** to open up the front panel, and detach the panel by pulling it towards you.

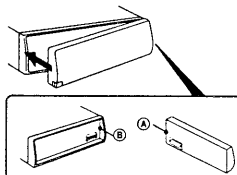


Notes

- Be sure not to drop the panel after detaching it from the unit.
- If you press **(RELEASE)** to detach the panel while the unit is still turned on, the power will automatically turn off in order to prevent damage to the speakers.

Attaching the front panel

Attach part ④ of the front panel to part ⑤ of the unit as illustrated and push until it clicks.



Notes

- Make sure that the front panel is the right way up when attaching it to the unit as it cannot be attached upside down.
- Do not press the front panel hard against the unit when attaching it to the unit. It can easily be attached by pressing it lightly against the unit.
- When you carry the front panel with you, keep it in the supplied front panel case.
- Do not press hard or give excessive pressure to the display windows of the front panel.
- Do not expose the front panel to direct sunlight, heat sources such as hot air ducts or have it in a humid place. Never leave it on the dashboard etc. of a car parked in direct sunlight where there may be a considerable rise in temperature inside the car.

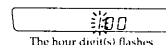
Caution alarm

If you turn the ignition key to the OFF position without removing the front panel, the caution alarm will beep for a few seconds (only when the POWER SELECT switch is set to the ② position).

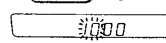
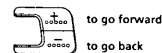
Setting the clock

The clock has a 24-hour digital indication.
For example, setting the clock to 10:08

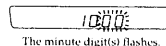
- 1 Press **(OFF)** or **(DSPL)** during operation.
- 2 Press **(DSPL)** for more than two seconds.



① Set the hour digits.

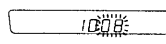
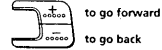


② Press **(SEL)** momentarily.

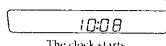


The minute digit(s) flashes.

③ Set the minute digits.



- 3 Press **(DSPL)** momentarily.



The clock starts.

Note

If the POWER SELECT switch on the bottom of the unit is set to the ② position, the clock cannot be set unless the power is turned on. Set the clock after you have turned on the radio.

Radio

Memorizing stations automatically

— Best Tuning Memory (BTM)

This function selects from the currently received band the stations with the strongest signals, and memorizes them in order of their frequency.

PREVENTING ACCIDENTS!

When tuning in while driving, use the automatic tuning and memory preset search functions instead of manual tuning.

- 1 Press **(TUNER)** repeatedly and select the band.
Each time you press **(TUNER)**, the band changes as follows:
FM1 → FM2 → FM3 → MW → LW

- 2 Press **(SENS)** for more than two seconds.

Notes

- The unit will not store stations with weak band frequencies on the preset number buttons. If there are only a few stations received, some preset number buttons will remain empty.
- If there is a preset number indicated in the display window, the unit will store stations on all preset number buttons from the one currently displayed.

Memorizing only the desired Stations

- 1 Press **(TUNER)** repeatedly, and select the desired band.
- 2 Tune in the station you wish to store on the preset number button.
- 3 Keep the desired preset number button (**(1)** to **(6)**) pressed for about two seconds until you hear a beep tone.

The number of the pressed preset number button appears in the display window.

Up to 6 stations on each band (FM1, FM2, FM3, MW and LW) can be stored on the preset number buttons in the order of your choice. Therefore, 18 FM stations can be memorized.
If you try to store another station on the same preset number button, the previously stored station will be erased.

Receiving the memorized stations

- 1 Press **(TUNER)** repeatedly, and select the desired band.
- 2 Press momentarily the preset number button **(1)** to **(6)** on which the desired station is stored.

Tip
Press either side of **(PRESET/OSC)** momentarily to receive the stations stored in the memory in order (Preset Search Function).

If FM stereo reception is poor — Monaural mode

Press **(SENS)** momentarily.
"MONO" appears on the display.
The sound will improve, but it will become monaural. (The "ST" indication will disappear.)

Changing the displayed items

Each time you press **(DISP)**, the display item changes between frequency and time.

If you cannot tune in a preset station

Press either side of **(SEEK/AMS)** momentarily to search for the station (automatic tuning).
The scanning stops when a station is received. Press either side of **(SEEK/AMS)** repeatedly until the desired station is received.

Note
If the automatic tuning stops too frequently, press **(SENS)** momentarily to display the "LCL" (local seek mode) indication. Only the stations with relatively strong signals will be tuned in.

Tip
If you know the frequency, press and hold either side of **(SEEK/AMS)** until the desired station is received (manual tuning).

Tip
If a traffic announcement starts while you are listening to another programme source, the unit automatically switches to the announcement, and goes back to the original source when the announcement is over.

- Notes**
- "NO TP" flashes for five seconds if the received station doesn't broadcast traffic announcements. Then, the unit starts searching for a station that does broadcast traffic announcements.
 - When the "EON" indication appears with "TP" in the display window, the current station makes use of broadcast traffic announcements of other stations in the same network.

To cancel the current traffic announcement

Press **(AF/TA)** momentarily.
To cancel all traffic announcements, turn off the function by pressing **(AF/TA)** until "AF" or "TA" disappears.

Presetting the volume of traffic announcements

You can preset the volume level of the traffic announcements beforehand, so you will not miss the announcement. When a traffic announcement starts, the volume will be automatically adjusted to the preset level.

- 1 Select the desired volume level.
- 2 Press **(3)** while holding down **(SEL)**.
A beep sounds, and the setting is stored.

Receiving emergency announcements

If an emergency announcement comes in while you are listening to the radio, the programme will be automatically switched to the announcement. If you are listening to a source other than the radio, the emergency announcements will only be heard if you set AF or TA to on. The unit will then automatically switch to these announcements no matter what you are listening to at the time.

RDS

Overview of the RDS function

The Radio Data System (RDS) is a broadcasting service that allows FM stations to send additional digital information along with the regular radio programme signal. Your car stereo offers you a variety of services. Here are just a few: re-tuning the same programme automatically, listening to traffic announcements, and locating a station by programme type.

- Notes**
- Depending on the country or region, not all of the RDS functions are available.
 - RDS may not work properly if the signal strength is weak, or if the station you are tuned in to is not transmitting RDS data.

Displaying the station name

The name of the station currently received lights up in the display.

Select an FM station.
When you tune in an FM station that transmits RDS data, the station name lights up in the display.

FR1 BBC R1

Note
The "—" indication means that an RDS station is being received.

Changing the displayed items

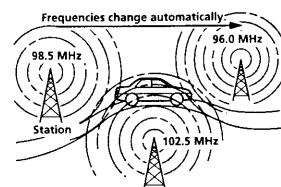
Each time you press **(DISP)**, the displayed items change as follows:

→ Frequency → Time → Station Name →

Note
"NO NAME" lights up if the station does not transmit RDS data.

Re-tuning the same programme automatically — Alternative Frequencies (AF)

The Alternative Frequencies (AF) function automatically selects and re-tunes to the station with the strongest signal in a network. Using this function, you can listen to the same programme continuously during a long-distance drive without having to re-tune the station manually.



- 1 Select an FM station.
- 2 Press **(AF/TA)** until "AF" lights up on the display.
The unit starts searching for an alternative station with a stronger signal in the same network.

Note
When there is no alternative station in the area, and you don't need to search for an alternative station, turn the AF function off by pressing **(AF/TA)** until "AF TA" disappears.

Changing the displayed items

Each time you press **(AF/TA)**, the displayed items change as follows:

→ AF → TA → AFTA → Blank →

- Select this to turn on both the AF and TA functions.

- Notes**
- "NO AF" and the station name flashes alternately, if the unit cannot find an alternative station in the network.
 - If the station service name starts flashing after you've made the preset selection, it means that no alternative frequency is available, and the unit cannot receive the PI (Programme Identification) data of the memorized station. Press **(SEEK/AMS)** while the station service name is flashing (within eight seconds). The unit starts searching for a station with the same PI data on another frequency ("PI SEEK" lights up, and no sound is heard). If the unit still cannot find an alternative station, "NO PI" lights up, and the unit goes back to the original preset station.

Listening to a regional programme

The "REG" (regional on) function of this unit lets you stay tuned to a regional programme without being switched to another regional station. (Note that you must turn the AF function on.) The unit is factory preset to "REG" but if you want to turn off the function, do the following.

- Press **(AFTA)** for more than two seconds until "REG" disappears.
Note that turning the "REG" function off might cause the unit to switch to another regional station within the same network.

Note
This function does not work in the United Kingdom and in some other areas.

Local link function (United Kingdom only)

The Local Link function lets you select other local stations in the area, even though they are not stored on your preset number buttons.

- 1 Press a preset number button of a local station.
- 2 Within five seconds, press the preset number button of the local station again.
- 3 Repeat this procedure until the desired local station is received.

Listening to traffic announcements

The Traffic Announcement (TA) and Traffic Programme (TP) data let you automatically tune in an FM station that is broadcasting traffic announcements even though you are listening to other programme sources.

Press **(AF/TA)** until "TA" or "AF TA" lights up on the display.

The unit starts searching for traffic information stations. "TP" lights up in the display when the unit finds a station broadcasting traffic announcements. When the traffic announcement starts, "TA" flashes. The flashing stops when the traffic announcement is over.

continue to next page → 7

Presetting the RDS stations with AF and TA data

When you preset the RDS stations, the unit stores each station's data as well as its frequency, so you don't have to turn on the AF or TA function every time you tune in the preset station. You can select different settings (AF, TA, or both) for individual preset stations, or the same setting for all preset stations.

Presetting the same setting for all preset stations

- 1 Select an FM band.
- 2 Press **(AF/TA)** repeatedly and select either "AF", "TA" or "AF TA" (for both AF and TA functions).
Note that turning the "AFTA" function off stores RDS stations as well as non-RDS FM stations.

- 3 Press **(SENS)** for two seconds.

Presetting different settings for each preset station

- 1 Select an FM band, and tune in the desired station.
- 2 Press **(AF/TA)** repeatedly and select either "AF", "TA" or "AF TA" (for both AF and TA functions).
- 3 Press the desired preset number button for two seconds until a beep sounds. Repeat from step 1 for presetting other stations.

Tip
If you want to change the preset AF and/or TA setting after you tune in the preset station, you can do so by turning on/off the AF or TA function.

Locating a station by programme type

You can locate the station you want by selecting one of the programme type shown below.

Note
In the countries or regions where EON data is not transmitted, you can use this function only for the stations you have tuned in once.

Programme types	Display
News	NEWS
Current Affairs	AFFAIRS
Information	INFO
Sports	SPORT
Education	EDUCATE
Drama	DRAMA
Culture	CULTURE
Science	SCIENCE
Varied	VARIED
Popular Music	POP M
Rock Music	ROCK M
Middle of the Road Music	M.O.R. M
Light Classical	LIGHT M
Classical	CLASSICS
Other Music Type	OTHER M
Not specified	NONE

Note
You cannot use this function in some countries where no PTY (Programme Type selection) data is available.

- 1 Press **(PTY)** during FM reception until "PTY" lights up on the display.

PTY INFO

The current programme type name appears if the station is transmitting the PTY data. "—" appears if the received station is not an RDS station or if the RDS data has not been received.

- 2 Press **(PTY)** repeatedly until the desired programme type appears.
The programme types appear in the order as shown in the above table. Note that you cannot select "NONE" (Not specified) for searching.

PTY SPORT

Other Functions

Adjusting the sound characteristics

1 Press **(SEL)** repeatedly to select the item you want to adjust. Each time you press **(SEL)**, the display item changes as follows.
VOL (volume) → BAS (bass) → TRE (treble) → BAL (balance) → FAD (fader)

2 Press **(+)** or **(-)** to adjust the selected item.

Adjust within three seconds. (After three seconds **(+)** and **(-)** will again serve as the volume control buttons.)

Muting the sound

— Mute

Press **(MUTE)**.
The "MUTE" indication flashes.

To restore the previous volume level, press again.

Changing the sound and display settings

Enjoying bass and treble even at low volume — Loudness

Press **(LOUD)**.
The bass and treble will be reinforced, and "LOUD" will appear on the display.

To cancel, press again.

Muting the beep tone

Press **(B)** while pressing **(SEL)**.
To obtain the beep tone again, press these buttons again.

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Additional Information

Precautions

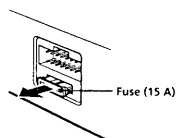
- If your car was parked in direct sunlight resulting in a considerable rise in temperature inside the car, allow the unit to cool off before turning it on.
- If no power is being supplied to the unit, check the connections first. If everything is in order, check the fuse.
- If no sound comes from the speakers in a 2-speaker system, set the fader control to the centre position.

If you have any questions or problems concerning your unit that are not covered in this manual, please consult your nearest Sony dealer.

Maintenance

Fuse Replacement

When replacing the fuse, be sure to use one matching the amperage rating stated on the fuse. If the fuse blows, check the power connection, and replace the fuse. If the fuse blows again after replacement, there may be an internal malfunction. In such a case consult your nearest Sony dealer.



Warning
Never use a fuse with an amperage rating exceeding the one supplied with the unit as this could damage the unit.

12

With the Optional Equipment CD Changer

Playing a CD

Press **(CD)**.
CD playback starts.

If a CD changer is connected, all the tracks play from the beginning.

Notes
• If two CD changers are connected, you need to press **(CD)** to change CD playback every time.
• Up to two CD changers can be connected.

Each time you press **(BSPL)** momentarily during CD playback, the displayed item changes as follows:

Elapsed playback time → Clock

Selecting CD changers

Press **(CD)** during CD playback. Each time you press **(CD)**, the other CD changer will be selected.

Locating a specific track

— Automatic Music Sensor (AMS)

During playback, press either side of **(SEEKAMS)** once for each track you want to skip.



To locate the previous tracks

To locate the succeeding tracks

Locating a specific point in a track

— Manual Search

During playback, press and hold either side of **(SEEKAMS)**. Release the button when you have found the desired part.



To reverse

To forward

Switching to other discs

During playback, press either side of **(PRESET/DISC)** momentarily.

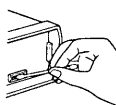


To return to the previous disc

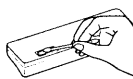
To advance to the next disc

Cleaning the Connectors

The unit may not function properly if the connectors on the unit and the front panel are not clean. To clear the connectors, press **(RELEASE)**, and remove the front panel. Then lightly dab the connectors with a cotton swab dipped in alcohol. Do not apply too much force. Otherwise, the connector may get damaged.

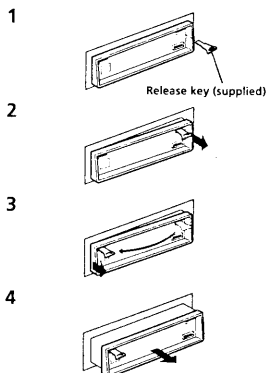


Main unit



Back of the front panel

Dismounting the unit



Scanning the tracks

— Intro scan

Press **(1)** during playback.
"INTRO" appears on the display.

The first 10 seconds of all the tracks on the currently selected disc are played in order. After the first disc is over, the next disc is played.

When you find the desired track, press again. The unit returns to the normal CD playback mode.

Playing tracks repeatedly

— Repeat play

To repeat a track

Press **(2)** repeatedly during CD playback until "REP 1" is displayed.

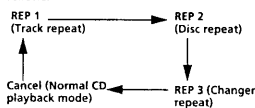
To repeat a disc

Press **(2)** repeatedly during CD playback until "REP 2" is displayed.

To repeat all the discs in both changers

Press **(2)** repeatedly during CD playback until "REP 3" is displayed.

Each time you press **(2)**, the display changes as follows:



Playing tracks in random order — Shuffle play

To play the tracks on the current disc in a random order

Press **(3)** repeatedly during CD playback until "SHUF 1" is displayed.

To play all the discs in the changer in random order

Press **(3)** repeatedly during CD playback until "SHUF 2" is displayed.

To play all the discs in both changers in random order

Press **(3)** repeatedly during CD playback until "SHUF 3" is displayed.

Each time you press **(3)**, the display changes as follows:



If you press **(1)** during shuffle play, the first 10 seconds of all tracks will be played in random order.

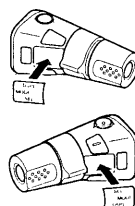
Searching for the desired disc — Disc scan

Press **(5)** during playback.
"D.SCAN" appears on the display.

The first 10 seconds of each disc's first track are played.
To cancel, press again.

The rotary commander labels

You can control this unit with the optional rotary commander (RM-X25). Some labels are supplied with the rotary commander. Attach the labels which match the functions of the master unit and the mounting position of the rotary commander. When you mount the rotary commander, attach the label in the illustration below.



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Connections

Caution

- This unit is designed for negative ground 12 V DC operation only.
- Connect the power connecting cord ⑤ to the unit and speakers before connecting it to the auxiliary power connector.
- Run all ground wires to a common ground point.

If Your Car has No Accessory Position on the Ignition Key Switch — POWER SELECT Switch

The illumination on the front panel is factory-set to be turned on even when the unit is not being played. However, this setting may cause some car battery wear if your car has no accessory position on the ignition key switch. To avoid this battery wear, set the POWER SELECT switch located on the bottom of the unit to the ②

position, then press the reset button. The illumination is reset to stay off while the unit is not being played.

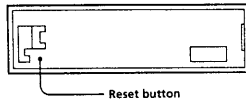
Note
The caution alarm for the front panel is not activated when the POWER SELECT switch is set to the ② position.

Change the position with a jeweler's screwdriver, etc.



Reset Button

When the installation and connections are over, be sure to press the reset button with a ball-point pen etc.



Note on the control leads

The power antenna control lead (blue) supplies +12 V DC when you turn on the tuner or when you activate the AF (Alternative Frequency) or the TA (Traffic Announcement) function.

Memory hold connection

When the yellow power input lead is connected, power will always be supplied to the memory circuit even when the ignition key is turned off.

Notes on speaker connection

- Before connecting the speakers, turn the unit off.
- Use speakers with an impedance of 4 to 8 ohms, and with adequate power handling capacities. Otherwise, the speakers may be damaged.

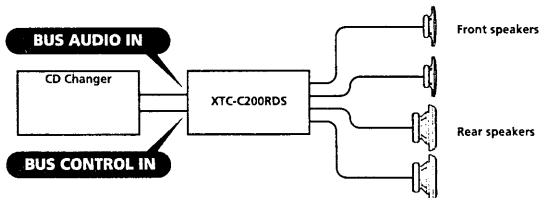
- Do not connect the terminals of the speaker system to the car chassis, and do not connect the terminals of the right speaker with those of the left speaker.
- Do not attempt to connect the speakers in parallel.
- Do not connect any active speakers (with built-in amplifiers) to the speaker terminals of the unit. Doing so may damage the active speakers. Therefore, be sure to connect passive speakers to these terminals.

Warning

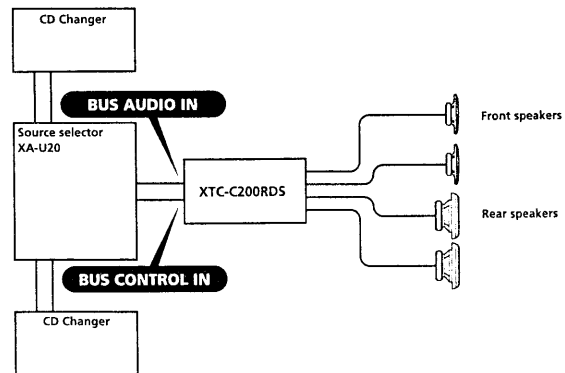
If you have a power antenna without a relay box, connecting this unit with the supplied power connecting cord ⑤ may damage the antenna.

Connection Diagram

Example 1/Example 1



Example 2



Installation

Precautions

- Do not tamper with the four holes on the upper surface of the unit. They are for tuner adjustments to be done only by service technicians.
- Choose the installation location carefully so that the unit will not hamper the driver during driving.
- Avoid installing the unit where it would be subject to high temperatures, such as from direct

sunlight or hot air from the heater, or where it would be subject to dust, dirt or excessive vibration.

- Use only the supplied mounting hardware for a safe and secure installation.

Mounting angle adjustment

Adjust the mounting angle to less than 20°.

How to Detach and Attach the Front Panel

Before installing the unit, detach the front panel.

To detach

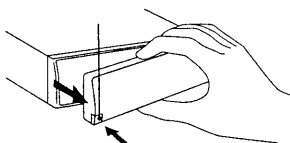
Press the RELEASE button to open up the front panel, then pull it out.

To attach

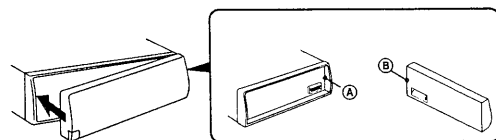
Align the parts ④ and ⑤, and push the front panel until it clicks.

To detach

RELEASE button

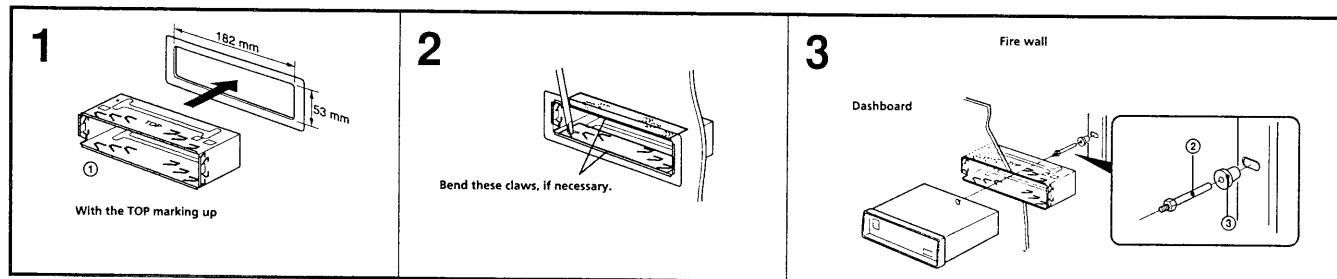


To attach

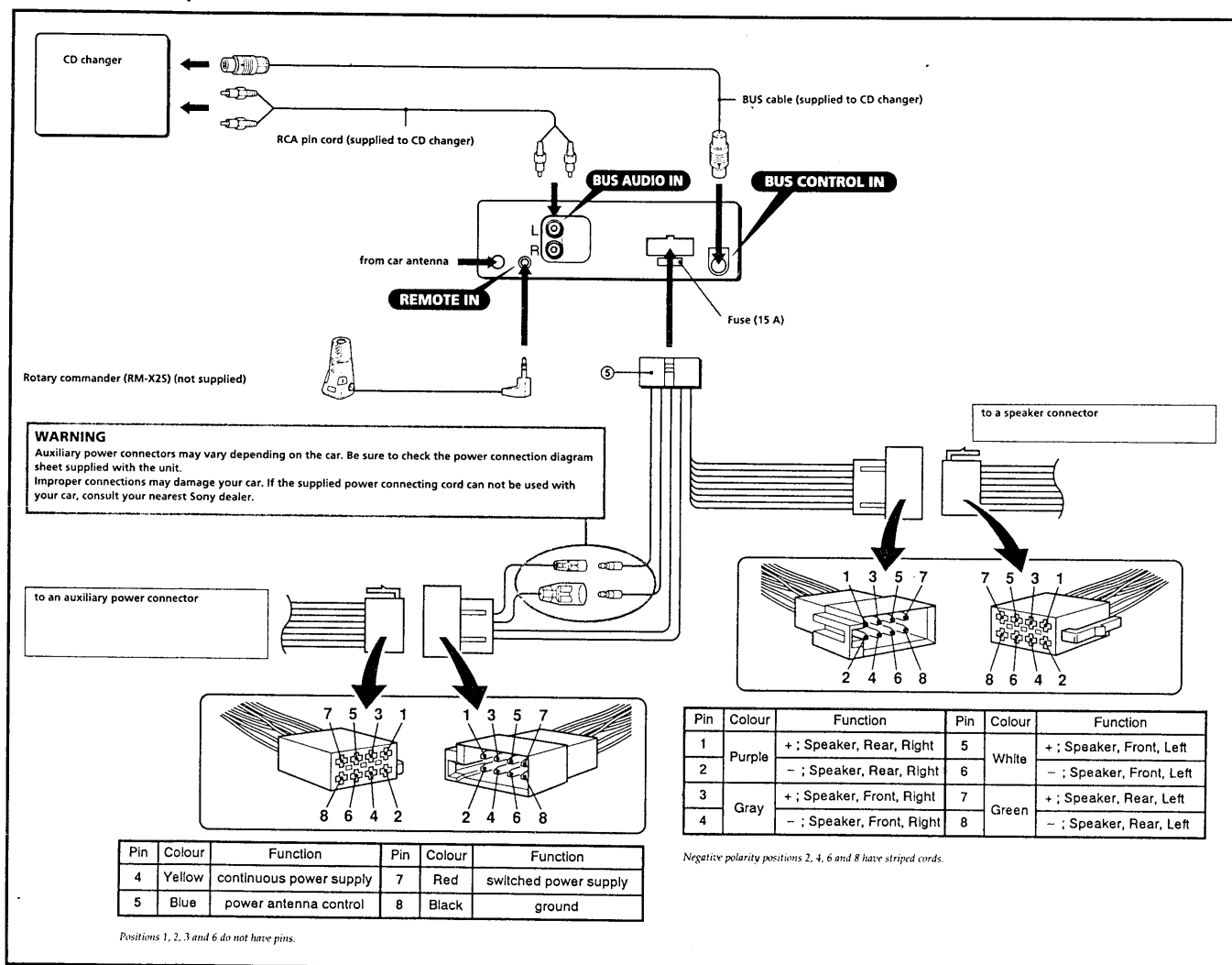


Mounting Example

Installation in the dashboard



Connections of Example



SECTION 2 ELECTRICAL ADJUSTMENTS

TEST MODE

This set have the test mode function, in the test mode. FM Auto Scan/Stop Level, MW Auto Scan/Stop Level and S-Meter adjustments can be performed easier than it in ordinaly procedure.

<Set the Test Mode>

1. Set the "OFF" mode.
2. Push the preset **4** button.
3. Push the preset **5** button.
4. Press the preset **1** button for two seconds.
5. Entire display turns ON, and test mode is instated.

<Release the Test mode>

1. Push the "OFF" button.

See the adjustment location from on page 11 for the adjustment.

TUNER SECTION

0 dB=1 μ V

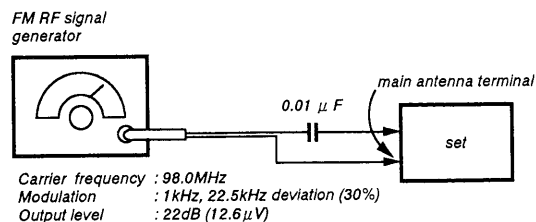
Cautions during repair

When the front end (TU1) is defective, replace it by a new one because its internal block is difficult to repair.

FM Auto Scan Stop Level Adjustment

Setting :

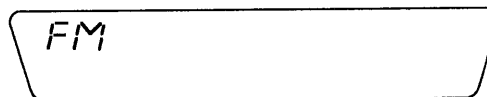
TUNER button : FM



Procedure :

1. Set to the test mode. (see page 8)
2. Set **FM** by pressing the **TUNER** button.
3. Push the **3** button.

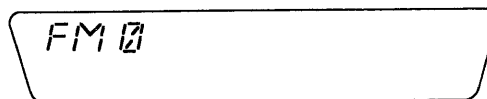
Main Display



4. Adjust with the volume RV02 on TU1 so that the "FM" indication turns to "FM **Ⓡ**" indication on the main display window.

But in case of already indicated "FM **Ⓡ**", turn the RV02 so that put out light "**Ⓡ**" indication and adjustment.

Main Display



Specification : Stop sensitivity : 22dB $\pm$ 3dB

Note : "**Ⓡ**" indication of main display was align voltage of TP (SD).

TP (SD) voltage 0V $\rightarrow$ "**Ⓡ**" light off

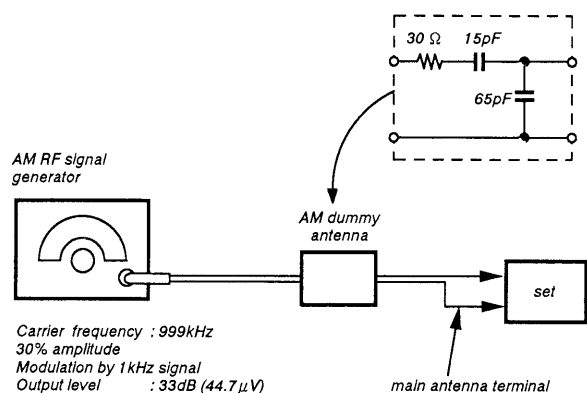
TP (SD) voltage 5V $\rightarrow$ "**Ⓡ**" light on

Adjustment Location : Main board (TU1) (See page 11)

MW Auto Scan Stop Level Adjustment

Setting :

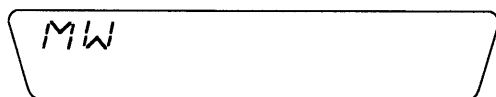
TUNER button : MW



Procedure :

1. Set to the test mode. (see page 8)
2. Set **MW** by pressing the **TUNER** button.
3. Push the **3** button.

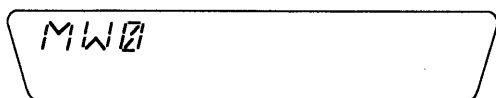
Main Display



4. Adjust with the volume RV01 on TU1 so that the "MW" indication turns to "MW **⏏**" indication on the main display window.

But in case of already indicated "MW **⏏**", turn the RV01 so that put out light "**⏏**" indication and adjustment.

Main Display



Specification : Stop sensitivity : 33dB $\pm$ 3dB

Note : "**⏏**" indication of main display was align voltage of TP (SD).

TP (SD) voltage 0V $\rightarrow$ "**⏏**" light off

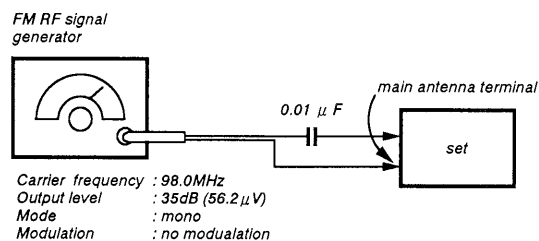
TP (SD) voltage 5V $\rightarrow$ "**⏏**" light on

Adjustment Location : Main board (TU1) (See page 11)

S-Meter Adjustment

Setting :

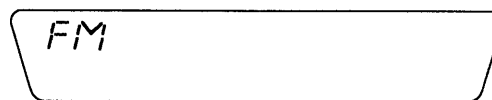
TUNER button : FM



Procedure :

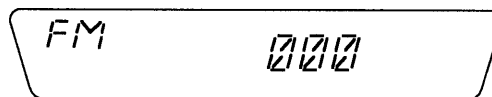
1. Set to the test mode. (see page 8)
2. Set **FM** by pressing the **TUNER** button.
3. Push the **3** button.

Main Display



4. Push the **6** button.

Main Display

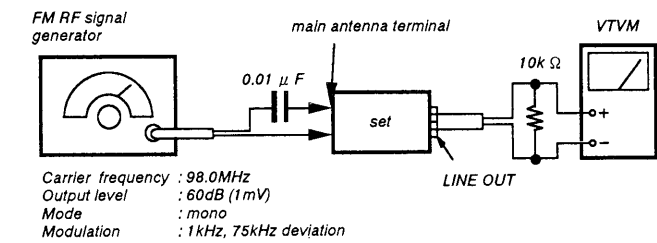


5. Adjust RV1, so that the display value becomes "118 $\pm$ 2".

Adjustment Location : Main board (RV1) (See page 11)

FM Noise Focus Adjustment

Setting :
TUNER button : FM

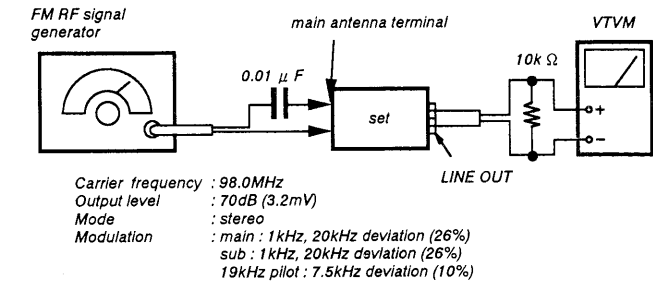


- Procedure :
1. Tune the 98.0MHz.
 2. The then output level is supposing that (B) dB.
 3. Adjust with the volume RV03 on TU1 so that the output Level is (B) – 32 ± 3dB then signal generator input set to – 20dB.

Adjustment Location : Main board (TU1) (See page 11)

FM Stereo Separation (30dB) Adjustment

Setting :
TUNER button : FM



Procedure :

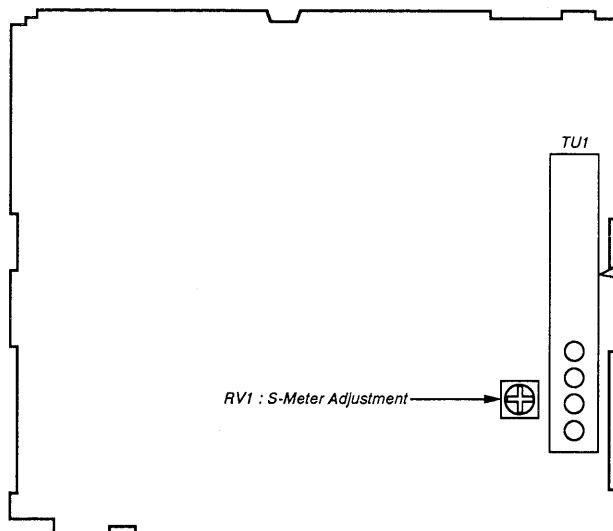
FM stereo signal generator output channel	VTVM connection	VTVM reading (dB)
L-CH	L-CH	Ⓐ
R-CH	L-CH	Ⓑ [Ⓐ] Adjust RV04 for minimum reading.
R-CH	R-CH	Ⓒ
L-CH	R-CH	Ⓓ [Ⓒ] Adjust RV04 for minimum reading.

L-CH Stereo separation : Ⓐ – Ⓑ[Ⓐ]
R-CH Stereo separation : Ⓒ – Ⓓ[Ⓒ]
The separations of both channels should be equal.

Specification : Separation more than 30dB.

Adjustment Location : Main board (TU1) (See page 11)

[MAIN BOARD] (Component side)



RV02 : FM AUTO SCAN STOP
LEVEL Adjustment

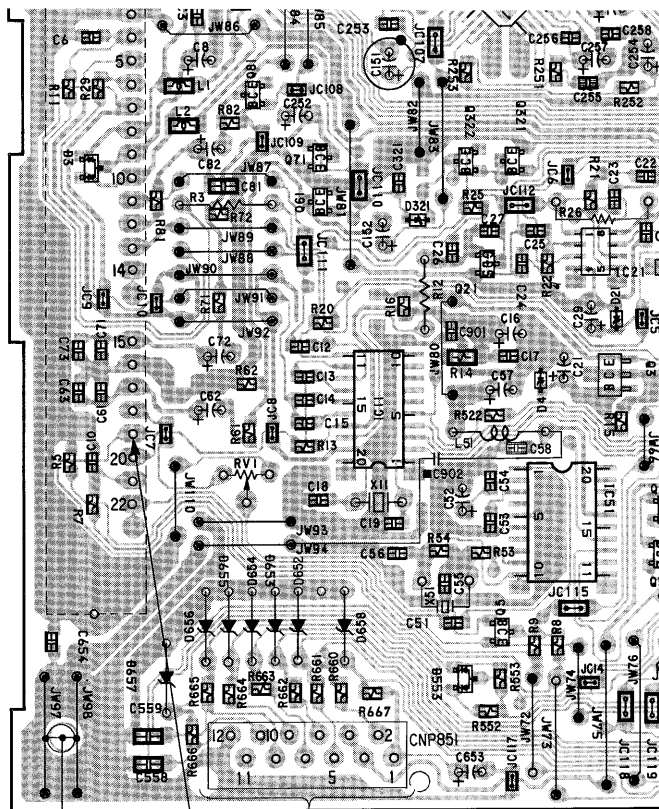
RV01 : AM AUTO SCAN STOP
LEVEL Adjustment

RV03 : FM NOISE FOCUS
Adjustment

RV04 : FM STEREO SEPARATION (30dB)
Adjustment

TU1

[MAIN BOARD] (Conductor side)



SECTION 3 EXPLANATION OF IC TERMINALS

IC11 (LC7216M) PLL IC

Pin No.	Pin name	I/O	Description																																	
1	XI	–	Oscillator connection terminal. (7.2MHz)																																	
2	CE	I	Chip enable input terminal.																																	
3	DATA IN	I	Data input terminal.																																	
4	CLK	I	Clock input terminal.																																	
5	DATA OUT	O	Data output terminal.																																	
6	NC	–	Not used. (OPEN)																																	
7	NC	–	Not used. (OPEN)																																	
8	SEEK	–	Not used. (OPEN)																																	
9	NC	–	Not used. (OPEN)																																	
10	NC	–	Not used. (OPEN)																																	
11	LO/DX	O	DX/LOCAL select output terminal. FM MW LW <table><tr><th>Mode \</th><th>Regular reception</th><th>SEEK 1st cycle</th><th>BTM 1st cycle</th><th>SEEK, BTM 2nd cycle & on</th><th>TP-AUTO SEEK 1st cycle</th></tr><tr><td>LO</td><td>DX output</td><td>LO output</td><td>LO output</td><td>DX output</td><td>LO output</td></tr><tr><td>DX</td><td>DX output</td><td>DX output</td><td>LO output</td><td>DX output</td><td>LO output</td></tr></table> SW <table><tr><th>Mode \</th><th>Regular reception</th><th>SEEK 1st cycle</th><th>BTM 1st cycle</th><th>SEEK, BTM 2nd cycle & on</th></tr><tr><td>LO</td><td>LO output</td><td>LO output</td><td>LO output</td><td>DX output</td></tr><tr><td>DX</td><td>DX output</td><td>DX output</td><td>LO output</td><td>DX output</td></tr></table>	Mode \	Regular reception	SEEK 1st cycle	BTM 1st cycle	SEEK, BTM 2nd cycle & on	TP-AUTO SEEK 1st cycle	LO	DX output	LO output	LO output	DX output	LO output	DX	DX output	DX output	LO output	DX output	LO output	Mode \	Regular reception	SEEK 1st cycle	BTM 1st cycle	SEEK, BTM 2nd cycle & on	LO	LO output	LO output	LO output	DX output	DX	DX output	DX output	LO output	DX output
Mode \	Regular reception	SEEK 1st cycle	BTM 1st cycle	SEEK, BTM 2nd cycle & on	TP-AUTO SEEK 1st cycle																															
LO	DX output	LO output	LO output	DX output	LO output																															
DX	DX output	DX output	LO output	DX output	LO output																															
Mode \	Regular reception	SEEK 1st cycle	BTM 1st cycle	SEEK, BTM 2nd cycle & on																																
LO	LO output	LO output	LO output	DX output																																
DX	DX output	DX output	LO output	DX output																																
12	SEEK	O	FM IF count request output terminal.																																	
13	AM IF	I	AM IF signal input terminal.																																	
14	FM IF	I	FM IF signal input terminal.																																	
15	AM OSC	I	AM IF oscillation signal input terminal.																																	
16	FM OSC	I	FM IF oscillation signal input terminal.																																	
17	VCC	–	Power supply. (4.5 – 6.5V)																																	
18	PD	O	Charge pump output terminal.																																	
19	VSS	–	GND																																	
20	XO	–	Oscillator connection terminal. (7.2MHz)																																	

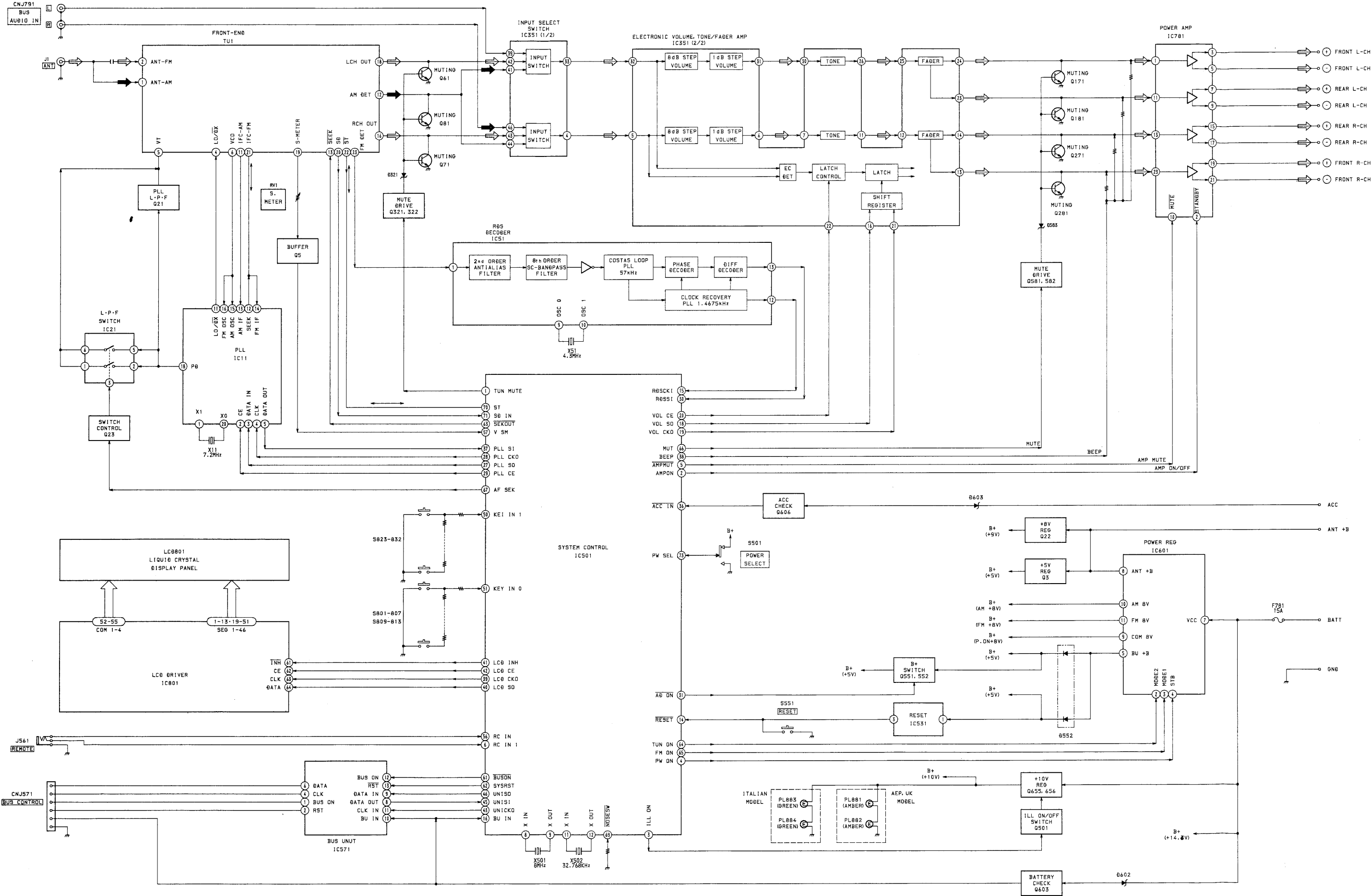
IC501 (MN1884820S3S)

Pin No.	Pin name	I/O	Description
1	TUN MUTE	O	Tuner mute control output.
2	AMP ON	O	Power AMP ON/OFF control.
3	ILL ON	O	Illumination ON/OFF control.
4	PW ON	O	System power ON/OFF control.
5	AMP MUT	O	Power AMP mute ON/OFF control.
6	RC IN1	I	Rotary comander shift input terminal.
7	VDD	–	Power supply. (+5V)
8	X IN	–	Oscillator connection terminal. (8.0MHz)
9	X OUT	–	Oscillator connection terminal. (8.0MHz)
10	GND	–	GND
11	XT IN	–	Sub clock (for timer) oscillator connection terminal. (32.768kHz)
12	XT OUT	–	Sub clock (for timer) oscillator connection terminal. (32.768kHz)
13	EX2	–	GND connection.
14	RESET	I	Reset terminal. L : Reset
15	RDS CKI	I	RDS clock input.
16	BU IN	I	Back-up detection input.
17	KEYACK	I	Key input acknowledge terminal.
18	VOL SO	O	Serial data output to electronic volume. (CXA 1946AQ)
19	VOL CKO	O	Serial clock output to electronic volume. (CXA 1946AQ)
20	VOL CE	O	Serial chip enable output to electronic volume. (CXA 1946AQ)
21	TAP MUT	O	Output for audio signal selection control.
22	LM LOD	O	Loading motor control. (Loading)
23	LMEJ	O	Loading motor control. (Eject)
24	AMS ON	O	AMS ON/OFF control. L : ON
25	N R OUT	O	Foward/reverse detection output. H : Foward, L : Reverse
26	AMS IN	I	AMS detection. L : Music present
27	PLL SO	O	PLL data output terminal.
28	PLL CKO	O	PLL clock output terminal.
29	PLL CE	O	PLL chip enable output terminal.
30	RDS SI	I	RDS data input terminal.
31	AD ON	O	Power supply control output for A/D converter.
32	DOL ON	I/O	Dolby control input/output.
33	MTL ON	I/O	Metal control input/output.
34	CM ON	I	Signal outoput for capstan motor control.
35	TAP ON	O	Power supply control output for tape.
36	ACC IN	O	Power supply detection input for accessories.
37	PLL SI	I	PLL data input for PLL IC (LC7216M).
38	BEEP	I	Control output for buzzer.
39	LCD CKO	O	Serial clock output to LCD driver (IC801).
40	LCD SO	O	Serial data output to LCD driver (IC801).
41	LCD INH	O	Blank display control to LCD driver (IC801).
42	LCD CE	O	Serial chip enable output to LCD driver (IC801).
43	UNI CKO	O	Serial clock output to BUS unit (MM1175XFF).
44	UNI CKI	I	Serial clock input from BUS unit (MM1175XFF).
45	UNI SI	I	Serial data input from BUS unit (MM1175XFF).

Pin No.	Pin name	I/O	Description
46	UNI SO	O	Serial data output to BUS unit (MM1175XFF).
47	VDD	–	Power supply. (+5V)
48	AVDD	–	Power supply for A/D converter. (+5V)
49	AVREF +	–	Reference voltage for A/D converter. (+5V)
50	KEY IN1	I	Key data input. (A/D converter)
51	KEY IN0	I	Key data input. (A/D converter)
52	KEY SEL1	I	Key function selection input. (A/D converter)
53	KEY SEL0	I	Key function selection input. (A/D converter)
54	DST SEL1	I	Terminal for model selection.
55	DST SEL0	I	Terminal for model selection.
56	RC INO	I	Rotary comander signal input.
57	VSM	I	FM/AM signal meter input. (A/D converter)
58	AVREF –	–	Reference voltage for A/D converter. (GND)
59	AVSS	–	GND terminal for A/D converter.
60	GND	–	GND
61	$\overline{\text{BUS ON}}$	O	BUS ON/OFF control.
62	$\overline{\text{SYS RST}}$	O	System reset control output.
63	$\overline{\text{SEK OUT}}$	O	Output termnal for seek out.
64	TUN ON	O	Output terminal for tuner power control. ON : H
65	FM ON	O	Output terminal for FM power control. ON : H
66	MUT	O	System Mute output.
67	AF SEK	O	Output terminal for AF-SEEK.
68	COLOR	O	Illumination color selection control.
69	$\overline{\text{NOSES W}}$	I	Front panel open/close detection.
70	ST	I/O	Terminal concurrently serving as ST-IND display input and forcible MONO output.
71	SD IN	I	Signal detector input. Terminal to decide the stop level of SEEK, AUTO-MEMORY, SCAN, etc.
72	REL S	I	S-reel detection input.
73	PW SEL	I	Power select input.
74	REL T	I	T-reel detection input.
75 – 78	POS 3 – 0	I	Position signal detection input.
79	$\overline{\text{TEST}}$	I	Test mode selection terminlal. L : Test mode
80	ILL IN	I	Illumination in signal detection.

SECTION 4
DIAGRAMS

4-1. BLOCK DIAGRAM



• Signal path.
→ : FM
→ : AM

4-2. PRINTED WIRING BOARDS

● SEMICONDUCTOR LOCATION

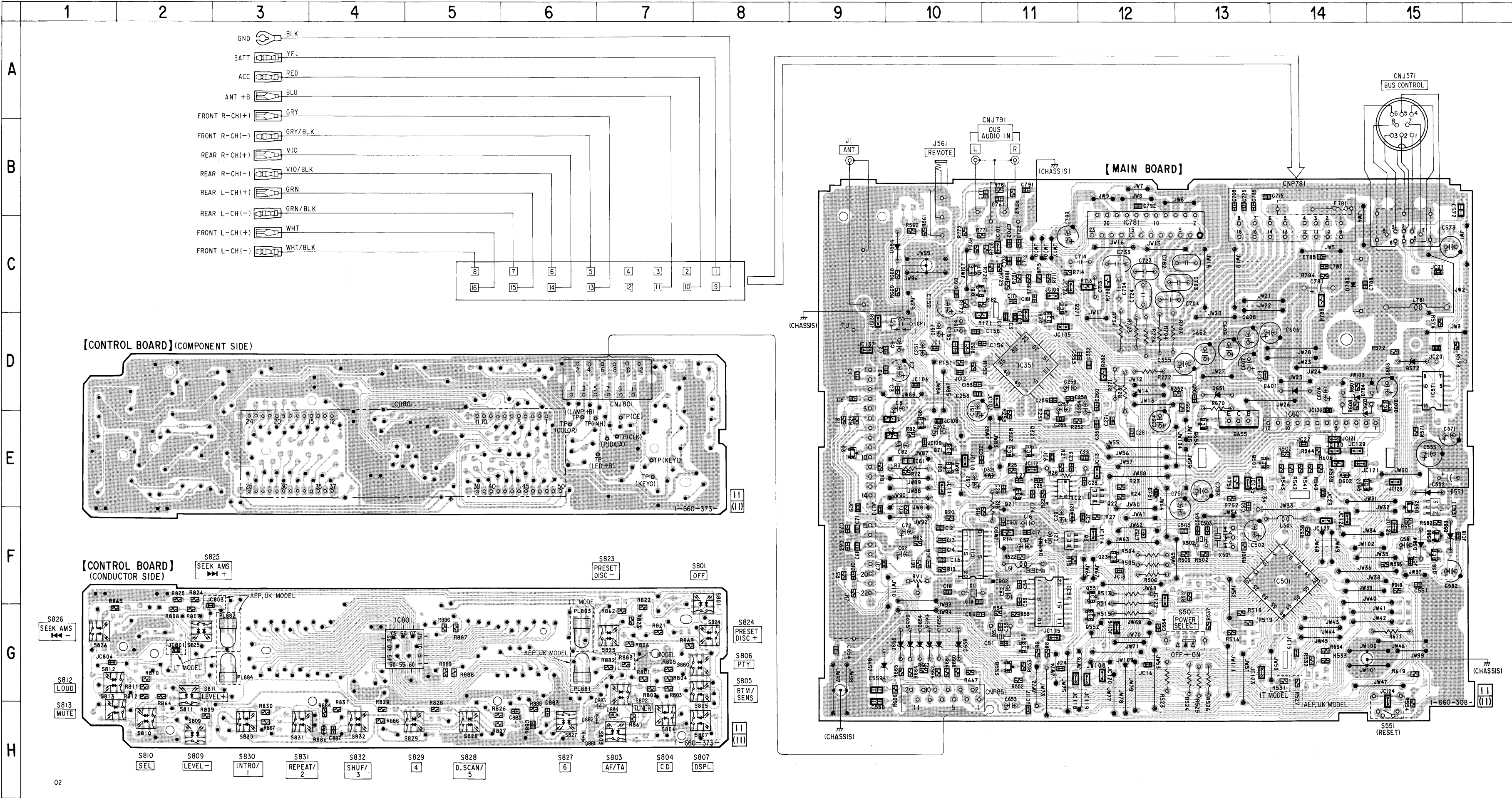
Ref. No.	Location	Ref. No.	Location
D3	E - 9	IC531	F - 15
D4	F - 11	IC571	D - 15
D21	F - 11	IC601	E - 14
D321	E - 11	IC781	C - 12
D551	E - 15	IC801	G - 4
D552	E - 15		
D553	G - 11	Q3	F - 13
D564	C - 10	Q5	G - 11
D572	D - 15	Q21	E - 11
D583	F - 15	Q22	E - 12
		Q23	F - 12
D584	F - 15		
D601	D - 14	Q61	E - 10
D602	E - 14	Q71	E - 10
D603	D - 14	Q81	E - 10
D651	D - 13	Q171	C - 10
		Q181	C - 10
D652	G - 10		
D653	G - 10	Q271	C - 11
D654	G - 10	Q281	D - 11
D655	G - 10	Q321	E - 11
D656	G - 10	Q322	E - 11
		Q501	E - 13
D657	G - 9		
D658	G - 10	Q551	F - 12
D751	E - 12	Q552	G - 12
D783	C - 14	Q581	F - 15
D784	D - 14	Q582	F - 15
		Q603	E - 14
D881	H - 6		
D882	H - 6	Q606	E - 15
D883	H - 7	Q655	E - 13
D884	H - 7	Q656	E - 13
D886	H - 4		
IC11	F - 10		
IC21	E - 11		
IC51	F - 11		
IC351	D - 11		
IC501	F - 14		

- Note:
- : parts extracted from the component side.
 - : parts mounted on the conductor side.
 - ▨ : Pattern on the side which is seen.
 - : Through hole.
 - ▨ : Pattern from the side which enables seeing.
(The other layers' patterns are not indicated)

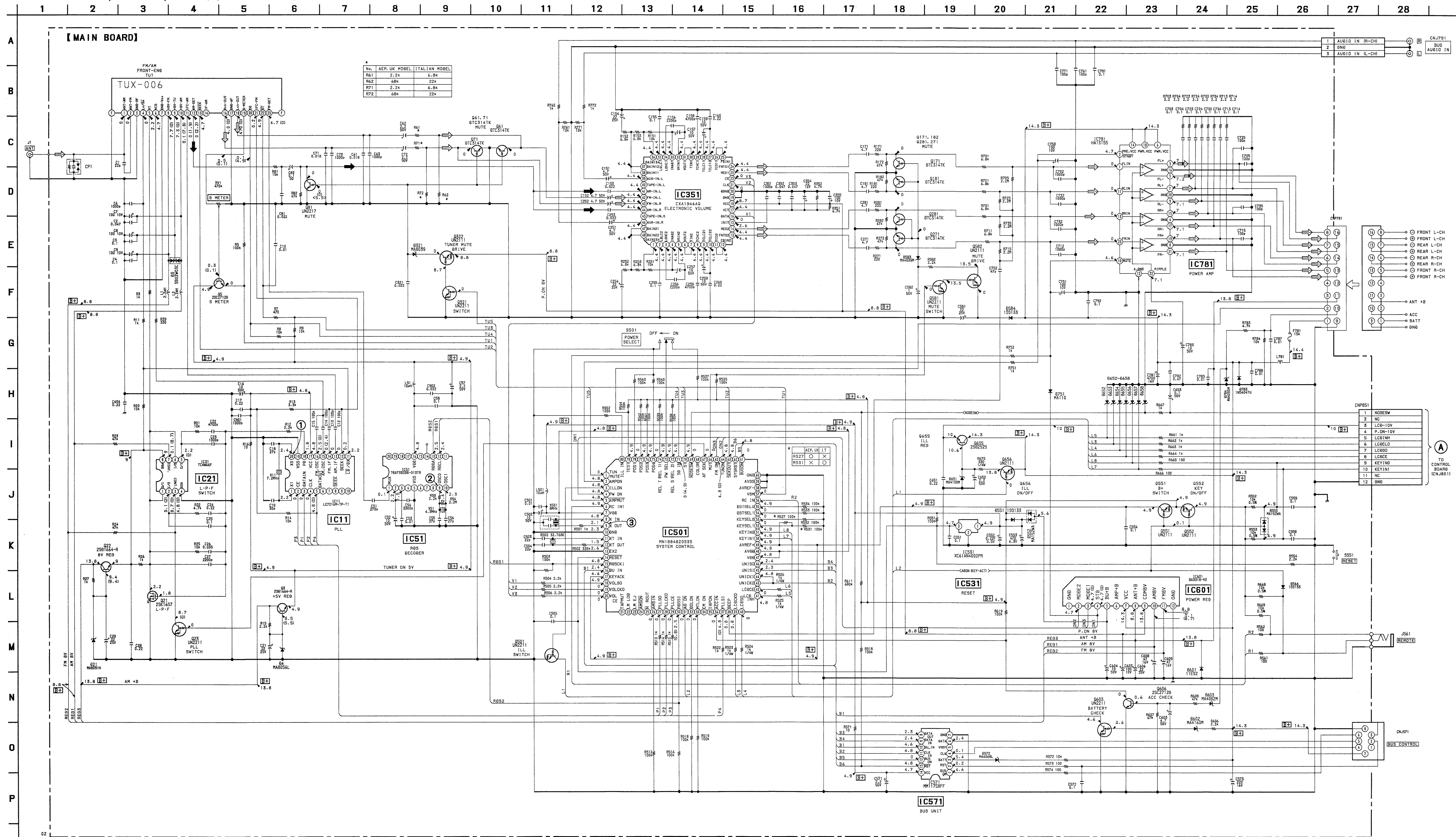
Caution :

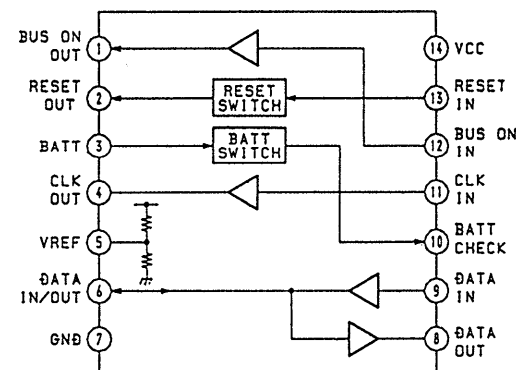
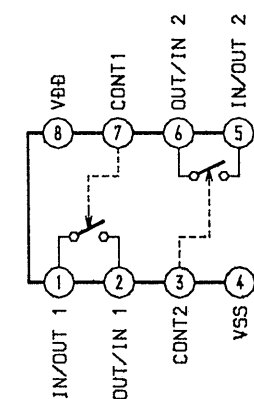
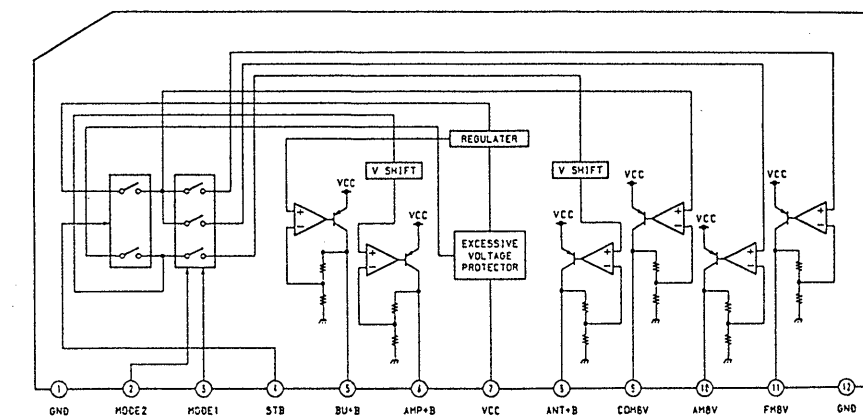
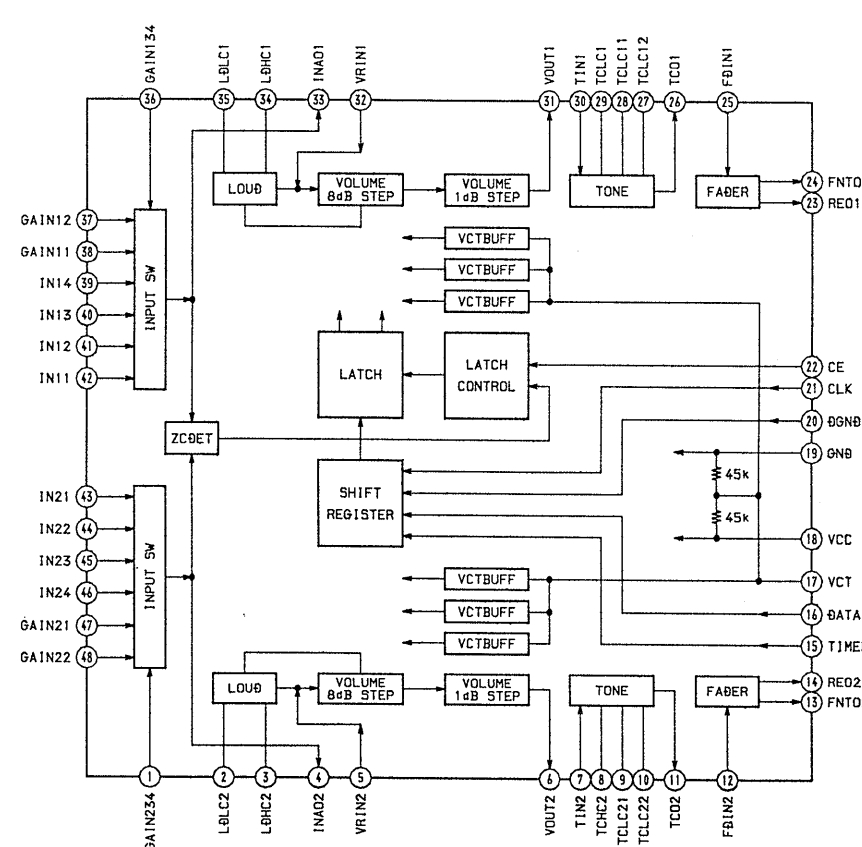
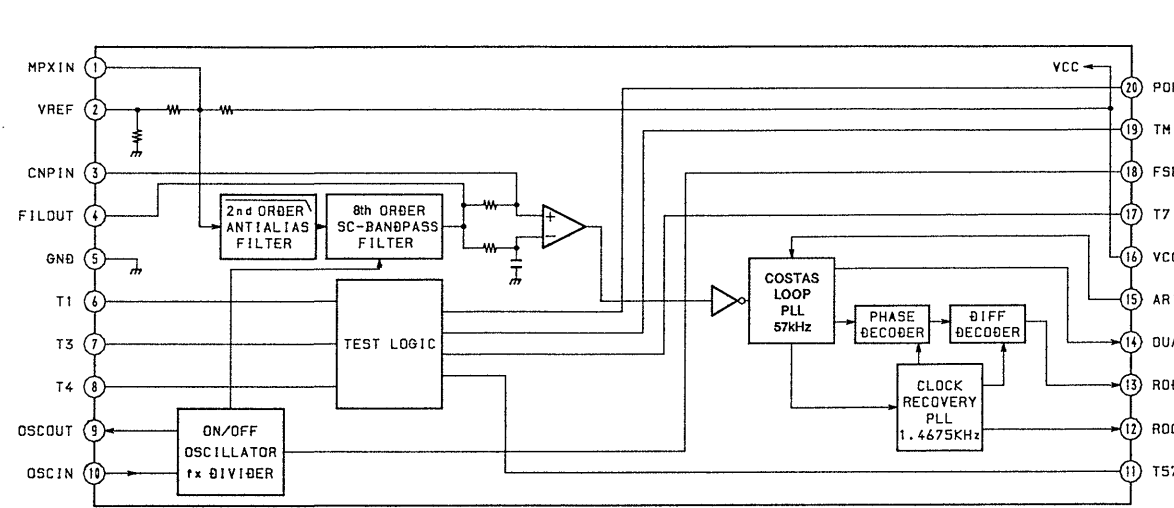
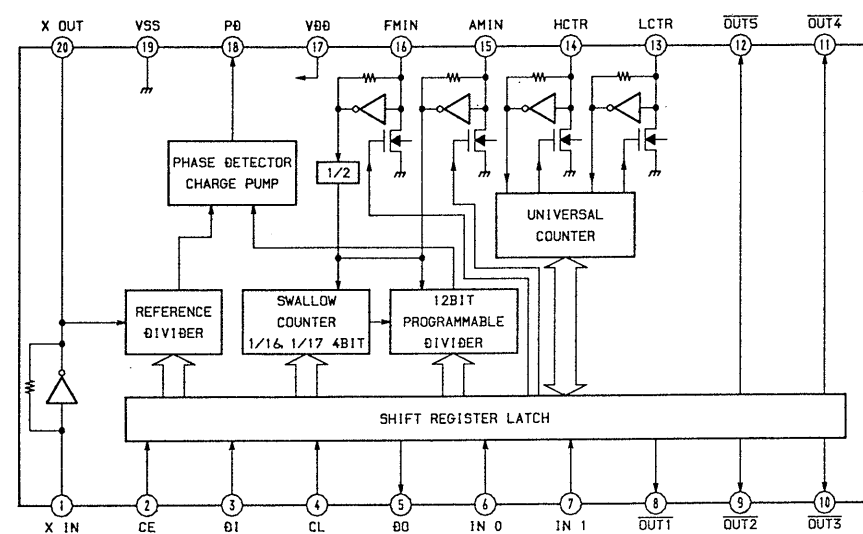
Pattern face side : Parts on the pattern face side seen from (Conductor Side) the pattern face are indicated.
Parts face side : Parts on the parts face side seen from the (Component side) parts face are indicated.

• Abbreviation
IT : Italian

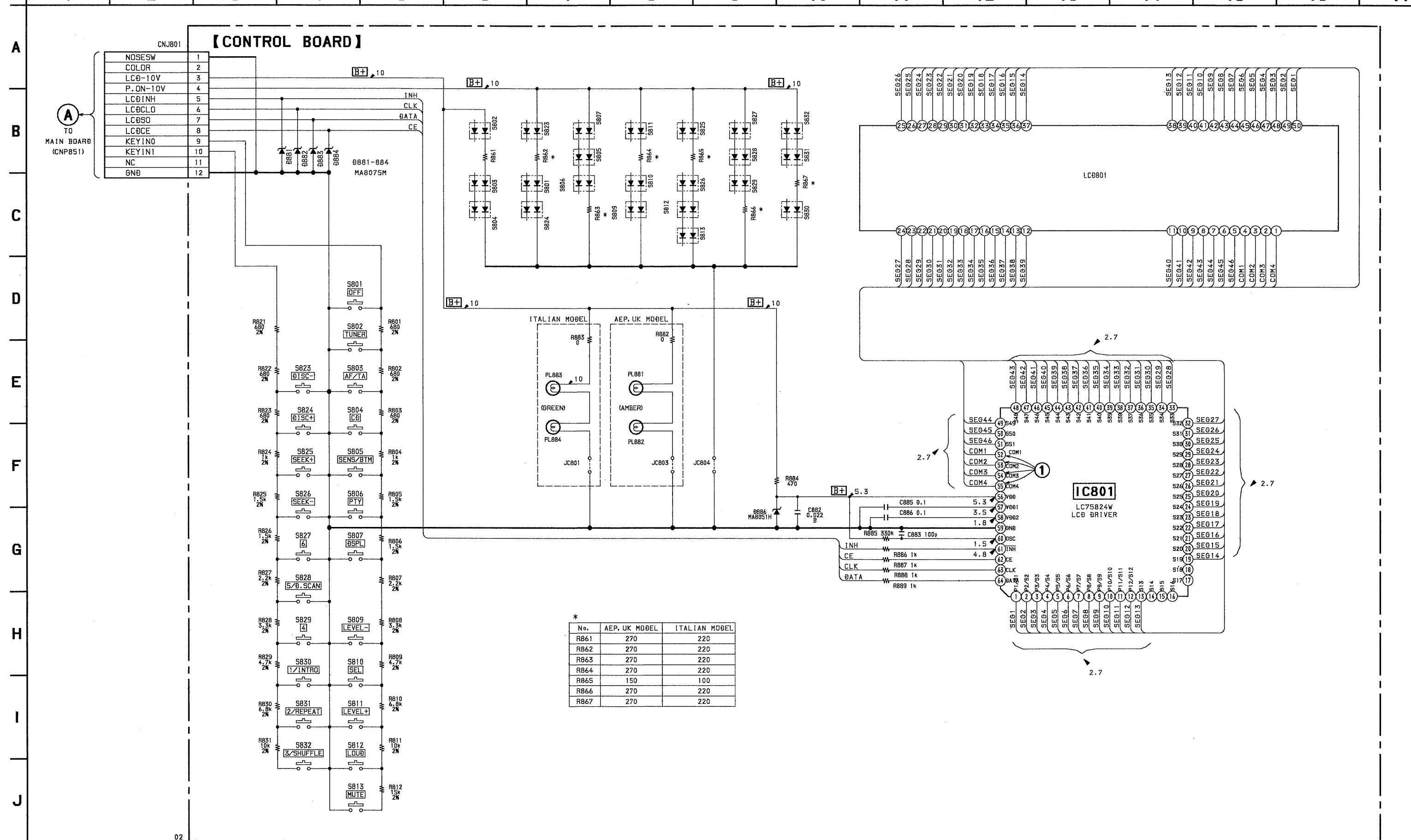


4-3. SCHEMATIC DIAGRAM (MAIN SECTION) • See page 23 for IC Block Diagrams.





	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
--	---	---	---	---	---	---	---	---	---	----	----	----	----	----	----	----	----



①

5.6V_p

12.2msec

IC8011 (52 ~ 55)

- All capacitors are in μF unless otherwise noted. pF: μF 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and $\frac{1}{2}W$ or less unless otherwise specified.
- Δ : internal component.
- **B+** : B+ Line
- : adjustment for repair.
- Power voltage is dc 14.4V and fed with regulated dc power supply from CNP781 (BATT, ACC).
- Voltage and waveforms are dc with respect to ground under no-signal (detuned) conditions.
- no mark : FM
- () : AM
- Voltages are taken with a VOM (Input impedance 10M Ω). Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with an oscilloscope.
- Voltage variations may be noted due to normal production tolerances.
- Circled numbers refer to waveforms.

SECTION 5 EXPLODED VIEWS

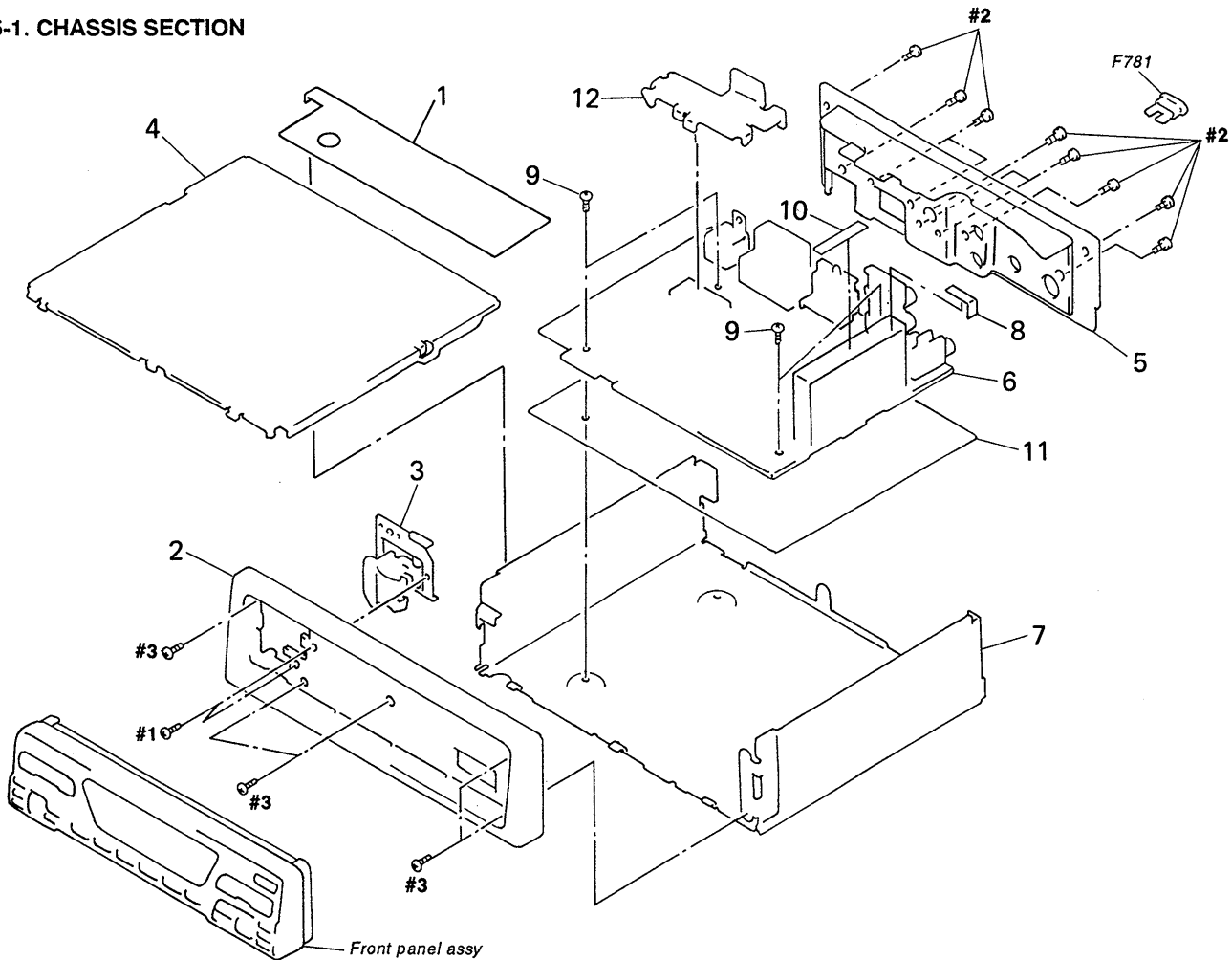
NOTE :

- -XX, -X mean standardized parts, so they may have some difference from the original one.
- The construction parts of an assembled part are indicated with a collation number in the remark column.

- Items marked “*” are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- The mechanical parts with no reference number in the exploded views are not supplied.
- Hardware (# mark) list and accessories and packing materials are given in the last of this parts list.

- Abbreviation
IT : Italian

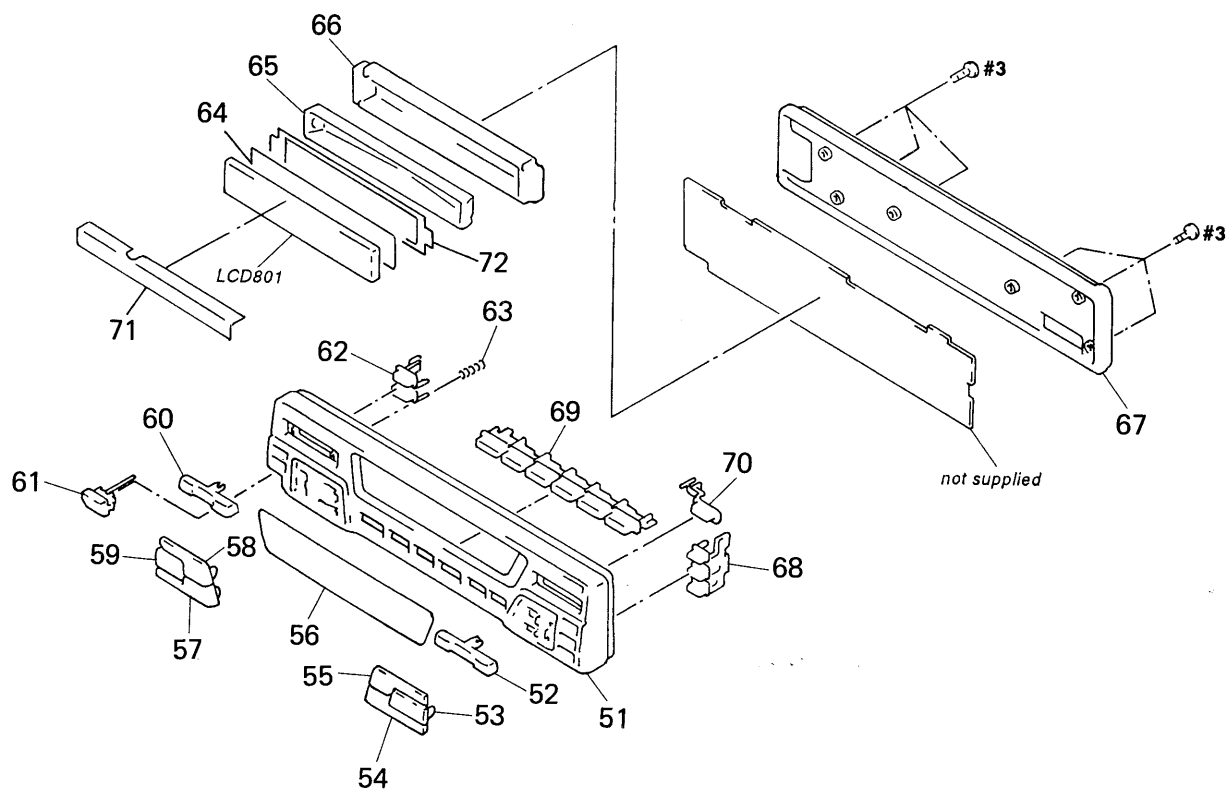
5-1. CHASSIS SECTION



Ref. No.	Part No.	Description	Remark
* 1	3-936-755-01	PLATE, SHIELD	
2	3-921-650-11	PANEL, SUB	
3	X-3367-636-1	LOCK ASSY	
* 4	X-3369-736-1	COVER ASSY	
* 5	3-931-219-31	HEAT SINK	
* 6	A-3309-102-A	MAIN BOARD, COMPLETE (AEP,UK)	
* 6	A-3309-103-A	MAIN BOARD, COMPLETE (IT)	
* 7	3-921-920-81	CHASSIS (MAIN)	

Ref. No.	Part No.	Description	Remark
* 8	3-355-209-01	PLATE (B), GROUND	
9	3-915-923-01	SCREW, GROUND POINT	
10	9-911-840-XX	CUSHION (U)	
* 11	3-932-422-01	INSULATOR	
* 12	3-920-605-01	HEAT SINK (IC)	
F781	1-532-982-11	FUSE (BRADE TYPE) (AUTO FUSE) (15A)	
* 14	3-925-065-01	SHEET (CU)	

5-2. FRONT PANEL SECTION



Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
51	3-932-412-01	PANEL, FRONT		63	3-930-844-01	SPRING (RELEASE)	
52	3-932-416-01	BUTTON (P/D)		* 64	3-932-421-01	SHEET (REFLECTOR)	
53	3-929-806-01	BUTTON (CD.TAPE)		* 65	3-932-418-01	PLATE (LCD), LIGHT GUIDE	
54	3-929-808-31	BUTTON (AM)		* 66	3-932-417-01	HOLDER (LCD)	
55	3-929-807-11	BUTTON (FM)		67	3-932-413-01	PANEL, FRONT BACK	
56	3-932-419-01	PLATE (LCD), INDICATION		68	3-929-817-31	BUTTON (3 GANG)	
57	3-929-810-01	BUTTON (-)		69	3-933-319-01	BUTTON (6 KEY)	
58	3-929-809-01	BUTTON (+)		70	3-932-414-01	BUTTON (OFF)	
59	3-929-805-01	BUTTON (SEL)		71	3-921-726-02	SHEET (LCD)	
60	3-932-415-01	BUTTON (S/A)		72	3-936-084-01	SHEET (INTERCEPTION•T)	
61	3-930-844-01	BUTTON (RELEASE)		LCD801	1-801-160-31	DISPLAY PANEL, LIQUID CRYSTAL	
62	3-929-816-01	BUTTON (2 GANG)					

SECTION 6 ELECTRICAL PARTS LIST

NOTE :

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- -XX, -X mean standardized parts, so they may have some difference from the original one.
- RESISTORS
All resistors are in ohms
METAL : Metal-film resistor
METAL OXIDE : Metal oxide-film resistor
F : nonflammable

- Items marked " * " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

● SEMICONDUCTORS

In each case, u : μ , for example :
 uA..... : μ A....., uPA..... : μ PA.....
 uPB..... : μ PB....., uPC..... : μ PC.....
 uPD..... : μ PD.....

● CAPACITORS

uF : μ F

● COILS

uH : μ H

When indicating parts by reference number, please include the board.

● Abbreviation

IT : Italian

Ref. No.	Part No.	Description	Remark			Ref. No.	Part No.	Description	Remark		
*	A-3309-102-A	MAIN BOARD, COMPLETE (AEP,UK)				C61	1-163-024-00	CERAMIC CHIP	0.018uF	10%	50V
*	A-3309-103-A	MAIN BOARD, COMPLETE (IT)				C62	1-124-925-11	ELECT	2.2uF	20%	100V
		*****				C63	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
		< CAPACITOR >				C71	1-163-024-00	CERAMIC CHIP	0.018uF	10%	50V
C1	1-163-235-11	CERAMIC CHIP	22PF	5%	50V	C72	1-124-925-11	ELECT	2.2uF	20%	100V
C2	1-163-809-11	CERAMIC CHIP	0.047uF	10%	25V	C73	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C3	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V	C81	1-163-063-91	CERAMIC CHIP	0.022uF	10%	50V
C4	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V	C82	1-124-463-00	ELECT	0.1uF	20%	50V
C6	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V	C151	1-126-963-11	ELECT	4.7uF	20%	50V
C7	1-126-933-11	ELECT	100uF	20%	10V	C152	1-126-963-11	ELECT	4.7uF	20%	50V
C8	1-126-933-11	ELECT	100uF	20%	10V	C153	1-163-037-11	CERAMIC CHIP	0.022uF	10%	25V
C9	1-126-933-11	ELECT	100uF	20%	10V	C154	1-128-551-11	ELECT	22uF	20%	25V
C10	1-164-232-11	CERAMIC CHIP	0.01uF		50V	C155	1-163-077-00	CERAMIC CHIP	0.1uF	10%	25V
C12	1-163-251-11	CERAMIC CHIP	100PF	5%	50V	C156	1-164-161-11	CERAMIC CHIP	0.0022uF	10%	100V
C13	1-163-251-11	CERAMIC CHIP	100PF	5%	50V	C157	1-126-964-11	ELECT	10uF	20%	50V
C14	1-163-251-11	CERAMIC CHIP	100PF	5%	50V	C158	1-163-017-00	CERAMIC CHIP	0.0047uF	5%	50V
C15	1-163-251-11	CERAMIC CHIP	100PF	5%	50V	C159	1-126-964-11	ELECT	10uF	20%	50V
C16	1-126-964-11	ELECT	10uF	20%	50V	C160	1-164-489-11	CERAMIC CHIP	0.22uF	10%	16V
C17	1-164-222-11	CERAMIC CHIP	0.22uF		25V	C171	1-164-506-11	CERAMIC CHIP	4.7uF		16V
C18	1-163-237-11	CERAMIC CHIP	27PF	5%	50V	C181	1-164-506-11	CERAMIC CHIP	4.7uF		16V
C19	1-163-104-00	CERAMIC CHIP	30PF	5%	50V	C251	1-126-963-11	ELECT	4.7uF	20%	50V
C21	1-128-551-11	ELECT	22uF	20%	25V	C252	1-126-963-11	ELECT	4.7uF	20%	50V
C22	1-163-017-00	CERAMIC CHIP	0.0047uF	5%	50V	C253	1-163-037-11	CERAMIC CHIP	0.022uF	10%	25V
C23	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V	C254	1-128-551-11	ELECT	22uF	20%	25V
C24	1-164-489-11	CERAMIC CHIP	0.22uF		16V	C255	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C25	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V	C256	1-164-161-11	CERAMIC CHIP	0.0022uF	10%	100V
C26	1-163-989-11	CERAMIC CHIP	0.033uF	10%	25V	C257	1-126-964-11	ELECT	10uF	20%	50V
C27	1-164-161-11	CERAMIC CHIP	0.0022uF	10%	100V	C258	1-163-017-00	CERAMIC CHIP	0.0047uF	5%	50V
C28	1-164-222-11	CERAMIC CHIP	0.22uF		25V	C259	1-126-964-11	ELECT	10uF	20%	50V
C29	1-128-551-11	ELECT	22uF	20%	25V	C260	1-164-489-11	CERAMIC CHIP	0.22uF	10%	16V
C30	1-163-181-00	CERAMIC CHIP	100PF	5%	50V	C271	1-164-506-11	CERAMIC CHIP	4.7uF		16V
C51	1-163-127-00	CERAMIC CHIP	270PF	5%	50V	C281	1-164-506-11	CERAMIC CHIP	4.7uF		16V
C52	1-126-964-11	ELECT	10uF	20%	50V	C321	1-163-037-11	CERAMIC CHIP	0.022uF	10%	25V
C53	1-164-232-11	CERAMIC CHIP	0.01uF		50V	C351	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C54	1-164-182-11	CERAMIC CHIP	0.0033uF	10%	50V	C352	1-163-809-11	CERAMIC CHIP	0.047uF	10%	25V
C55	1-163-237-11	CERAMIC CHIP	27PF	5%	50V	C353	1-163-809-11	CERAMIC CHIP	0.047uF	10%	25V
C56	1-163-237-11	CERAMIC CHIP	27PF	5%	50V	C354	1-128-551-11	ELECT	22uF	20%	25V
C57	1-124-925-11	ELECT	2.2uF	20%	100V	C355	1-126-933-11	ELECT	100uF	20%	10V
C58	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V	C501	1-164-232-11	CERAMIC CHIP	0.01uF		50V
						C502	1-126-964-11	ELECT	10uF	20%	50V

Ref. No.	Part No.	Description	Remark
C503	1-163-235-11	CERAMIC CHIP 22PF	5% 50V
C504	1-163-235-11	CERAMIC CHIP 22PF	5% 50V
C505	1-164-004-11	CERAMIC CHIP 0.1uF	10% 25V
C551	1-164-004-11	CERAMIC CHIP 0.1uF	10% 25V
C552	1-125-705-11	CAPACITOR 0.22F	0 5.5V
C553	1-126-935-11	ELECT 470uF	20% 6.3V
C554	1-164-004-11	CERAMIC CHIP 0.1uF	10% 25V
C558	1-163-077-00	CERAMIC CHIP 0.1uF	10% 25V
C559	1-163-077-00	CERAMIC CHIP 0.1uF	10% 25V
C571	1-124-925-11	ELECT 2.2uF	20% 100V
C572	1-163-077-00	CERAMIC CHIP 0.1uF	10% 25V
C573	1-126-934-11	ELECT 220uF	20% 16V
C581	1-128-551-11	ELECT 22uF	20% 25V
C582	1-124-903-11	ELECT 1uF	20% 50V
C603	1-126-963-11	ELECT 4.7uF	20% 50V
C604	1-126-964-11	ELECT 10uF	20% 50V
C606	1-128-551-11	ELECT 22uF	20% 25V
C607	1-126-933-11	ELECT 100uF	20% 10V
C608	1-126-967-11	ELECT 47uF	20% 16V
C609	1-126-967-11	ELECT 47uF	20% 16V
C651	1-164-222-11	CERAMIC CHIP 0.22uF	25V
C652	1-124-925-11	ELECT 2.2uF	20% 100V
C653	1-124-463-00	ELECT 0.1uF	20% 50V
C654	1-164-222-11	CERAMIC CHIP 0.22uF	25V
C702	1-163-009-11	CERAMIC CHIP 0.001uF	10% 50V
C703	1-136-165-00	FILM 0.1uF	5% 50V
C704	1-136-165-00	FILM 0.1uF	5% 50V
C705	1-163-251-11	CERAMIC CHIP 100PF	5% 50V
C712	1-163-009-11	CERAMIC CHIP 0.001uF	10% 50V
C713	1-136-165-00	FILM 0.1uF	5% 50V
C714	1-136-165-00	FILM 0.1uF	5% 50V
C715	1-163-251-11	CERAMIC CHIP 100PF	5% 50V
C722	1-163-009-11	CERAMIC CHIP 0.001uF	10% 50V
C723	1-136-165-00	FILM 0.1uF	5% 50V
C724	1-136-165-00	FILM 0.1uF	5% 50V
C725	1-163-251-11	CERAMIC CHIP 100PF	5% 50V
C732	1-163-009-11	CERAMIC CHIP 0.001uF	10% 50V
C733	1-136-165-00	FILM 0.1uF	5% 50V
C734	1-136-165-00	FILM 0.1uF	5% 50V
C735	1-163-251-11	CERAMIC CHIP 100PF	5% 50V
C751	1-126-933-11	ELECT 100uF	20% 10V
C752	1-163-243-11	CERAMIC CHIP 47PF	5% 50V
C753	1-126-933-11	ELECT 100uF	20% 10V
C761	1-163-251-11	CERAMIC CHIP 100PF	5% 50V
C771	1-163-251-11	CERAMIC CHIP 100PF	5% 50V
C781	1-126-937-11	ELECT 4700uF	20% 16V
C782	1-136-173-00	FILM 0.47uF	5% 50V
C783	1-126-964-11	ELECT 10uF	20% 50V
C785	1-164-232-11	CERAMIC CHIP 0.01uF	50V
C787	1-164-232-11	CERAMIC CHIP 0.01uF	50V
C788	1-164-232-11	CERAMIC CHIP 0.01uF	50V
C791	1-164-004-11	CERAMIC CHIP 0.1uF	10% 25V

Ref. No.	Part No.	Description	Remark
C792	1-164-004-11	CERAMIC CHIP 0.1uF	10% 25V
C901	1-163-009-11	CERAMIC CHIP 0.001uF	10% 50V
C902	1-162-596-11	CERAMIC 0.022uF	
< JACK >			
CNJ571	1-580-907-31	PLUG, CONNECTOR (BUS CONTROL)	
CNJ791	1-774-811-11	JACK, PIN 2P (BUS AUDIO IN)	
< CONNECTOR >			
CNP781	1-774-701-11	PIN, CONNECTOR 16P	
CNP851	1-764-422-11	PLUG, CONNECTOR 12P	
< COMPOSITION CIRCUIT BLOCK >			
CP1	1-519-504-11	GAP, DISCHARGE	
< DIODE >			
D3	8-719-991-65	DIODE SB02W03C	
D4	8-719-422-49	DIODE MA8056-L	
D21	8-719-422-97	DIODE MA8091-M	
D321	8-719-422-12	DIODE MA8039	
D551	8-719-991-33	DIODE 1SS133T-77	
D552	8-719-400-20	DIODE MA152WA	
D553	8-719-400-20	DIODE MA152WA	
D564	8-719-991-33	DIODE 1SS133T-77	
D572	8-719-035-77	DIODE MA4068-L (TA)	
D583	8-719-035-54	DIODE MA4039-M (TA)	
D584	8-719-991-33	DIODE 1SS133T-77	
D601	8-719-200-82	DIODE 11ES2	
D602	8-719-022-90	DIODE MA8160M	
D603	8-719-110-03	DIODE RD7.5ESB2	
D651	8-719-035-94	DIODE MA4100-M (TA)	
D652	8-719-035-72	DIODE MA4062-(TA)	
D653	8-719-035-72	DIODE MA4062-(TA)	
D654	8-719-035-72	DIODE MA4062-(TA)	
D655	8-719-035-72	DIODE MA4062-(TA)	
D656	8-719-035-72	DIODE MA4062-(TA)	
D657	8-719-035-72	DIODE MA4062-(TA)	
D658	8-719-035-72	DIODE MA4062-(TA)	
D751	8-719-404-46	DIODE MA110	
D783	8-719-049-38	DIODE 1N5404TU	
D784	8-719-034-98	DIODE MA4200-M (QZ)	
< FUSE >			
F781	1-532-982-11	FUSE (BRADE TYPE) (AUTO FUSE) (15A)	
< IC >			
IC11	8-759-823-81	IC LC7216M	
IC21	8-759-242-66	IC TC4W66F	
IC51	8-759-163-63	IC TDA7330BD-013TR	
IC351	8-752-075-48	IC CXA1946AQ-T6	
IC501	8-759-371-27	IC MN1884820S3S	

MAIN

Ref. No.	Part No.	Description	Remark
IC531	8-759-363-81	IC XC61AN4002PR	
IC571	8-759-096-16	IC MM1175XF-T1	
IC601	8-759-347-49	IC BA3918-V2	
IC781	8-759-369-41	IC HA13155	
< JACK >			
J1	1-770-279-11	JACK, ANTENNA (ISO) (ANT)	
J561	1-566-822-41	JACK (REMOTE)	
< JUMPER RESISTOR >			
JC1	1-216-295-00	METAL CHIP 0	5% 1/10W
JC2	1-216-295-00	METAL CHIP 0	5% 1/10W
JC3	1-216-295-00	METAL CHIP 0	5% 1/10W
JC4	1-216-295-00	METAL CHIP 0	5% 1/10W
JC5	1-216-295-00	METAL CHIP 0	5% 1/10W
JC6	1-216-295-00	METAL CHIP 0	5% 1/10W
JC7	1-216-295-00	METAL CHIP 0	5% 1/10W
JC8	1-216-295-00	METAL CHIP 0	5% 1/10W
JC9	1-216-295-00	METAL CHIP 0	5% 1/10W
JC10	1-216-295-00	METAL CHIP 0	5% 1/10W
JC11	1-216-295-00	METAL CHIP 0	5% 1/10W
JC12	1-216-295-00	METAL CHIP 0	5% 1/10W
JC13	1-216-295-00	METAL CHIP 0	5% 1/10W
JC14	1-216-295-00	METAL CHIP 0	5% 1/10W
JC15	1-216-295-00	METAL CHIP 0	5% 1/10W
JC16	1-216-295-00	METAL CHIP 0	5% 1/10W
JC17	1-216-295-00	METAL CHIP 0	5% 1/10W
JC18	1-216-295-00	METAL CHIP 0	5% 1/10W
JC19	1-216-295-00	METAL CHIP 0	5% 1/10W
JC20	1-216-295-00	METAL CHIP 0	5% 1/10W
JC21	1-216-295-00	METAL CHIP 0	5% 1/10W
JC22	1-216-295-00	METAL CHIP 0	5% 1/10W
JC23	1-216-295-00	METAL CHIP 0	5% 1/10W
JC101	1-216-296-00	METAL CHIP 0	5% 1/8W
JC103	1-216-296-00	METAL CHIP 0	5% 1/8W
JC104	1-216-296-00	METAL CHIP 0	5% 1/8W
JC105	1-216-296-00	METAL CHIP 0	5% 1/8W
JC106	1-216-295-00	METAL CHIP 0	5% 1/10W
JC107	1-216-296-00	METAL CHIP 0	5% 1/8W
JC108	1-216-295-00	METAL CHIP 0	5% 1/10W
JC109	1-216-295-00	METAL CHIP 0	5% 1/10W
JC110	1-216-296-00	METAL CHIP 0	5% 1/8W
JC111	1-216-296-00	METAL CHIP 0	5% 1/8W
JC112	1-216-296-00	METAL CHIP 0	5% 1/8W
JC113	1-216-296-00	METAL CHIP 0	5% 1/8W
JC114	1-216-296-00	METAL CHIP 0	5% 1/8W
JC115	1-216-296-00	METAL CHIP 0	5% 1/8W
JC116	1-216-296-00	METAL CHIP 0	5% 1/8W
JC117	1-216-295-00	METAL CHIP 0	5% 1/10W
JC118	1-216-296-00	METAL CHIP 0	5% 1/8W
JC119	1-216-296-00	METAL CHIP 0	5% 1/8W
JC120	1-216-296-00	METAL CHIP 0	5% 1/8W

Ref. No.	Part No.	Description	Remark
JC121	1-216-296-00	METAL CHIP 0	5% 1/8W
JC122	1-216-296-00	METAL CHIP 0	5% 1/8W
JC123	1-216-296-00	METAL CHIP 0	5% 1/8W
JC124	1-216-296-00	METAL CHIP 0	5% 1/8W
JC125	1-216-296-00	METAL CHIP 0	5% 1/8W
JC126	1-216-296-00	METAL CHIP 0	5% 1/8W
JC127	1-216-296-00	METAL CHIP 0	5% 1/8W
JC128	1-216-296-00	METAL CHIP 0	5% 1/8W
JC129	1-216-296-00	METAL CHIP 0	5% 1/8W
JC130	1-216-296-00	METAL CHIP 0	5% 1/8W
JC131	1-216-296-00	METAL CHIP 0	5% 1/8W
JC132	1-216-295-00	METAL CHIP 0	5% 1/10W
JC134	1-216-296-00	METAL CHIP 0	5% 1/8W
JC135	1-216-296-00	METAL CHIP 0	5% 1/8W
JC136	1-216-296-00	METAL CHIP 0	5% 1/8W
JC137	1-216-296-00	METAL CHIP 0	5% 1/8W
JC138	1-216-296-00	METAL CHIP 0	5% 1/8W
< COIL >			
L1	1-410-196-11	INDUCTOR CHIP 2.2uH	
L2	1-410-196-11	INDUCTOR CHIP 2.2uH	
L51	1-410-509-11	INDUCTOR 10uH	
L501	1-410-509-11	INDUCTOR 10uH	
L781	1-411-669-11	COIL, CHOKE	
< TRANSISTOR >			
Q3	8-729-106-68	TRANSISTOR 2SD1615A-GP	
Q5	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q21	8-729-021-94	TRANSISTOR 2SK1657-T1B	
Q22	8-729-106-68	TRANSISTOR 2SD1615A-GP	
Q23	8-729-421-22	TRANSISTOR UN2211	
Q61	8-729-424-70	TRANSISTOR UN2217	
Q71	8-729-424-70	TRANSISTOR UN2217	
Q81	8-729-424-70	TRANSISTOR UN2217	
Q171	8-729-920-21	TRANSISTOR DTC314TKH04	
Q181	8-729-920-21	TRANSISTOR DTC314TKH04	
Q271	8-729-920-21	TRANSISTOR DTC314TKH04	
Q281	8-729-920-21	TRANSISTOR DTC314TKH04	
Q321	8-729-421-22	TRANSISTOR UN2211	
Q322	8-729-424-08	TRANSISTOR UN2111	
Q501	8-729-421-22	TRANSISTOR UN2211	
Q551	8-729-424-08	TRANSISTOR UN2111	
Q552	8-729-424-08	TRANSISTOR UN2111	
Q581	8-729-421-22	TRANSISTOR UN2211	
Q582	8-729-424-08	TRANSISTOR UN2111	
Q603	8-729-421-22	TRANSISTOR UN2211	
Q606	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q655	8-729-030-18	TRANSISTOR 2SD2525	
Q656	8-729-424-08	TRANSISTOR UN2111	
< RESISTOR >			
R3	1-249-417-11	CARBON 1K	5% 1/4W

Ref. No.	Part No.	Description		Remark	Ref. No.	Part No.	Description		Remark
R5	1-216-097-91	METAL GLAZE	100K	5% 1/10W	R352	1-216-065-00	METAL CHIP	4.7K	5% 1/10W
R7	1-216-041-00	METAL CHIP	470	5% 1/10W	R501	1-216-049-91	METAL GLAZE	1K	5% 1/10W
R8	1-216-073-00	METAL CHIP	10K	5% 1/10W	R502	1-216-109-00	METAL CHIP	330K	5% 1/10W
R9	1-216-073-00	METAL CHIP	10K	5% 1/10W	R503	1-216-097-91	METAL GLAZE	100K	5% 1/10W
R11	1-216-049-91	METAL GLAZE	1K	5% 1/10W	R504	1-249-421-11	CARBON	2.2K	5% 1/4W
					R505	1-249-421-11	CARBON	2.2K	5% 1/4W
R12	1-249-421-11	CARBON	2.2K	5% 1/4W	R506	1-249-421-11	CARBON	2.2K	5% 1/4W
R13	1-216-061-00	METAL CHIP	3.3K	5% 1/10W	R512	1-216-097-91	METAL GLAZE	100K	5% 1/10W
R14	1-216-222-00	METAL GLAZE	10K	5% 1/8W	R513	1-249-417-11	CARBON	1K	5% 1/4W
R15	1-216-057-00	METAL CHIP	2.2K	5% 1/10W	R514	1-249-417-11	CARBON	1K	5% 1/4W
R16	1-216-001-00	METAL CHIP	10	5% 1/10W	R515	1-249-417-11	CARBON	1K	5% 1/4W
					R516	1-216-097-91	METAL GLAZE	100K	5% 1/10W
R20	1-216-073-00	METAL CHIP	10K	5% 1/10W	R518	1-216-097-91	METAL GLAZE	100K	5% 1/10W
R21	1-216-073-00	METAL CHIP	10K	5% 1/10W	R519	1-216-097-91	METAL GLAZE	100K	5% 1/10W
R22	1-216-065-00	METAL CHIP	4.7K	5% 1/10W	R522	1-216-049-91	METAL GLAZE	1K	5% 1/10W
R23	1-216-089-91	METAL GLAZE	47K	5% 1/10W	R523	1-249-417-11	CARBON	1K	5% 1/4W
R24	1-216-089-91	METAL GLAZE	47K	5% 1/10W					
					R524	1-249-417-11	CARBON	1K	5% 1/4W
R25	1-216-073-00	METAL CHIP	10K	5% 1/10W	R525	1-249-417-11	CARBON	1K	5% 1/4W
R26	1-249-417-11	CARBON	1K	5% 1/4W	R526	1-249-417-11	CARBON	1K	5% 1/4W
R27	1-216-049-91	METAL GLAZE	1K	5% 1/10W	R527	1-216-097-91	METAL GLAZE	100K	5% 1/10W
R29	1-216-037-00	METAL CHIP	330	5% 1/10W					(AEP,UK)
R53	1-216-057-00	METAL CHIP	2.2K	5% 1/10W	R531	1-216-097-91	METAL GLAZE	100K	5% 1/10W
									(IT)
R54	1-216-129-00	METAL CHIP	2.2M	5% 1/10W					
R61	1-216-057-00	METAL CHIP	2.2K	5% 1/10W	R532	1-216-097-91	METAL GLAZE	100K	5% 1/10W
				(AEP,UK)	R533	1-216-097-91	METAL GLAZE	100K	5% 1/10W
R61	1-216-069-00	METAL GLAZE	6.8K	5% 1/10W	R534	1-216-097-91	METAL GLAZE	100K	5% 1/10W
				(IT)	R535	1-216-097-91	METAL GLAZE	100K	5% 1/10W
R62	1-216-093-00	METAL CHIP	68K	5% 1/10W	R537	1-216-097-91	METAL GLAZE	100K	5% 1/10W
				(AEP,UK)					
R62	1-216-081-00	METAL CHIP	22K	5% 1/10W	R538	1-216-097-91	METAL GLAZE	100K	5% 1/10W
				(IT)	R539	1-216-097-91	METAL GLAZE	100K	5% 1/10W
R71	1-216-057-00	METAL CHIP	2.2K	5% 1/10W	R540	1-216-097-91	METAL GLAZE	100K	5% 1/10W
				(AEP,UK)	R541	1-216-097-91	METAL GLAZE	100K	5% 1/10W
					R542	1-216-097-91	METAL GLAZE	100K	5% 1/10W
R71	1-216-069-00	METAL GLAZE	6.8K	5% 1/10W					
				(IT)	R543	1-216-097-91	METAL GLAZE	100K	5% 1/10W
R72	1-216-093-00	METAL CHIP	68K	5% 1/10W	R544	1-216-097-91	METAL GLAZE	100K	5% 1/10W
				(AEP,UK)	R551	1-216-097-91	METAL GLAZE	100K	5% 1/10W
R72	1-216-081-00	METAL CHIP	22K	5% 1/10W	R552	1-208-806-11	METAL GLAZE	10K	0.50% 1/10W
				(IT)	R553	1-208-806-11	METAL GLAZE	10K	0.50% 1/10W
R81	1-216-077-00	METAL CHIP	15K	5% 1/10W					
R82	1-216-089-91	METAL GLAZE	47K	5% 1/10W	R554	1-216-057-00	METAL CHIP	2.2K	5% 1/10W
R151	1-216-073-00	METAL CHIP	10K	5% 1/10W	R561	1-216-025-91	METAL GLAZE	100	5% 1/10W
					R562	1-216-025-91	METAL GLAZE	100	5% 1/10W
R152	1-216-218-00	METAL GLAZE	6.8K	5% 1/8W	R571	1-216-001-00	METAL CHIP	10	5% 1/10W
R153	1-216-069-00	METAL CHIP	6.8K	5% 1/10W	R572	1-216-073-00	METAL CHIP	10K	5% 1/10W
R171	1-216-182-00	METAL GLAZE	220	5% 1/8W					
R172	1-216-089-91	METAL GLAZE	47K	5% 1/10W	R573	1-216-025-91	METAL GLAZE	100	5% 1/10W
R181	1-216-033-00	METAL CHIP	220	5% 1/10W	R574	1-216-025-91	METAL GLAZE	100	5% 1/10W
					R582	1-216-057-00	METAL CHIP	2.2K	5% 1/10W
R182	1-216-089-91	METAL GLAZE	47K	5% 1/10W	R606	1-216-206-00	METAL GLAZE	2.2K	5% 1/8W
R251	1-216-073-00	METAL CHIP	10K	5% 1/10W	R607	1-216-089-91	METAL GLAZE	47K	5% 1/10W
R252	1-216-069-00	METAL CHIP	6.8K	5% 1/10W					
R253	1-216-069-00	METAL CHIP	6.8K	5% 1/10W	R608	1-216-089-91	METAL GLAZE	47K	5% 1/10W
R271	1-247-815-91	CARBON	220	5% 1/4W	R611	1-247-899-11	CARBON	680K	5% 1/4W
					R619	1-216-097-91	METAL GLAZE	100K	5% 1/10W
R272	1-249-437-11	CARBON	47K	5% 1/4W	R661	1-216-049-91	METAL GLAZE	1K	5% 1/10W
R281	1-247-815-91	CARBON	220	5% 1/4W					
R282	1-216-238-91	METAL GLAZE	47K	5% 1/8W					
R351	1-216-065-00	METAL CHIP	4.7K	5% 1/10W					

MAIN

CONTROL

Ref. No.	Part No.	Description	Remark
R662	1-216-049-91	METAL GLAZE 1K	5% 1/10W
R663	1-216-049-91	METAL GLAZE 1K	5% 1/10W
R664	1-216-049-91	METAL GLAZE 1K	5% 1/10W
R665	1-216-025-91	METAL GLAZE 100	5% 1/10W
R666	1-216-025-91	METAL GLAZE 100	5% 1/10W
R667	1-216-049-91	METAL GLAZE 1K	5% 1/10W
R668	1-208-806-11	METAL GLAZE 10K	0.50% 1/10W
R669	1-208-806-11	METAL GLAZE 10K	0.50% 1/10W
R670	1-249-411-11	CARBON 330	5% 1/4W
R701	1-216-069-00	METAL CHIP 6.8K	5% 1/10W
R703	1-249-385-11	CARBON 2.2	5% 1/6W
R704	1-249-385-11	CARBON 2.2	5% 1/6W
R705	1-216-129-00	METAL CHIP 2.2M	5% 1/10W
R711	1-216-069-00	METAL CHIP 6.8K	5% 1/10W
R713	1-216-134-00	METAL CHIP 2.2	5% 1/8W
R714	1-216-298-00	METAL CHIP 2.2	5% 1/10W
R715	1-216-129-00	METAL CHIP 2.2M	5% 1/10W
R721	1-216-069-00	METAL CHIP 6.8K	5% 1/10W
R723	1-249-385-11	CARBON 2.2	5% 1/6W
R724	1-249-385-11	CARBON 2.2	5% 1/6W
R725	1-216-129-00	METAL CHIP 2.2M	5% 1/10W
R731	1-216-069-00	METAL CHIP 6.8K	5% 1/10W
R733	1-216-134-00	METAL CHIP 2.2	5% 1/8W
R734	1-249-385-11	CARBON 2.2	5% 1/6W
R735	1-216-129-00	METAL CHIP 2.2M	5% 1/10W
R751	1-216-198-91	METAL GLAZE 1K	5% 1/8W
R752	1-216-049-91	METAL GLAZE 1K	5% 1/10W
R761	1-216-073-00	METAL CHIP 10K	5% 1/10W
R762	1-216-049-91	METAL GLAZE 1K	5% 1/10W
R771	1-216-073-00	METAL CHIP 10K	5% 1/10W
R772	1-216-049-91	METAL GLAZE 1K	5% 1/10W
R783	1-216-214-00	METAL GLAZE 4.7K	5% 1/8W
R784	1-216-073-00	METAL CHIP 10K	5% 1/10W
R918	1-216-097-91	METAL GLAZE 100K	5% 1/10W
< VARIABLE RESISTOR >			
RV1	1-238-605-31	RES, ADJ, CARBON 470K (S METER)	
< SWITCH >			
S501	1-571-478-11	SWITCH, SLIDE (POWER SELECT)	
S551	1-692-431-21	SWITCH, TACTILE (RESET SW)	
< VIBRATOR >			
X11	1-577-126-51	VIBRATOR, CRYSTAL (7.2MHz)	
X51	1-760-556-11	VIBRATOR, CRYSTAL (4.3MHz)	
X501	1-579-952-21	VIBRATOR, CERAMIC (8MHz)	
X502	1-567-098-41	VIBRATOR, CRYSTAL (32.768kHz)	

Ref. No.	Part No.	Description	Remark
CONTROL BOARD, COMPLETE			

*	3-932-417-01	HOLDER (LCD)	
*	3-932-418-01	PLATE (LCD), LIGHT GUIDE	
*	3-932-421-01	SHEET (REFLECTOR)	
< CAPACITOR >			
C882	1-163-037-11	CERAMIC CHIP 0.022uF	10% 25V
C883	1-163-251-11	CERAMIC CHIP 100PF	5% 50V
C885	1-163-038-91	CERAMIC CHIP 0.1uF	25V
C886	1-163-038-91	CERAMIC CHIP 0.1uF	25V
< CONNECTOR >			
CNJ801	1-764-423-11	PIN, CONNECTOR 12P	
< DIODE >			
D881	8-719-422-76	DIODE MA8075-M	
D882	8-719-422-76	DIODE MA8075-M	
D883	8-719-422-76	DIODE MA8075-M	
D884	8-719-422-76	DIODE MA8075-M	
D886	8-719-422-43	DIODE MA8051-H	
< IC >			
IC801	8-759-365-90	IC LC75824W	
< JUMPER RESISTOR >			
JC801	1-216-295-00	METAL CHIP 0	5% 1/10W (IT)
JC803	1-216-295-00	METAL CHIP 0	5% 1/10W (AEP,UK)
JC804	1-216-295-00	METAL CHIP 0	5% 1/10W
< LIQUID CRYSTAL DISPLAY >			
LCD801	1-801-160-31	DISPLAY PANEL, LIQUID CRYSTAL	
< PILOT LAMP >			
PL881	1-517-406-21	LAMP, PILOT(AMBER) (AEP,UK)	
PL882	1-517-406-21	LAMP, PILOT(AMBER) (AEP,UK)	
PL883	1-517-407-21	LAMP, PILOT(GREEN) (IT)	
PL884	1-517-407-21	LAMP, PILOT(GREEN) (IT)	
< RESISTOR >			
R801	1-216-647-11	METAL CHIP 680	0.5% 1/10W
R802	1-216-647-11	METAL CHIP 680	0.5% 1/10W
R803	1-216-647-11	METAL CHIP 680	0.5% 1/10W
R804	1-208-437-61	METAL GLAZE 1K	2% 1/10W
R805	1-208-441-61	METAL GLAZE 1.5K	2% 1/10W
R806	1-208-441-61	METAL GLAZE 1.5K	2% 1/10W
R807	1-216-659-11	METAL CHIP 2.2K	0.5% 1/10W
R808	1-208-449-61	METAL GLAZE 3.3K	2% 1/10W
R809	1-208-453-61	METAL GLAZE 4.7K	2% 1/10W

CONTROL

Ref. No.	Part No.	Description	Remark
R810	1-216-671-11	METAL CHIP	6.8K 0.5% 1/10W
R811	1-208-462-61	METAL GLAZE	10K 2% 1/10W
R812	1-208-810-11	METAL GLAZE	15K 2% 1/10W
R821	1-216-647-11	METAL CHIP	680 0.5% 1/10W
R822	1-216-647-11	METAL CHIP	680 0.5% 1/10W
R823	1-216-647-11	METAL CHIP	680 0.5% 1/10W
R824	1-208-437-61	METAL GLAZE	1K 2% 1/10W
R825	1-208-441-61	METAL GLAZE	1.5K 2% 1/10W
R826	1-208-441-61	METAL GLAZE	1.5K 2% 1/10W
R827	1-216-659-11	METAL CHIP	2.2K 0.5% 1/10W
R828	1-208-449-61	METAL GLAZE	3.3K 2% 1/10W
R829	1-208-453-61	METAL GLAZE	4.7K 2% 1/10W
R830	1-216-671-11	METAL CHIP	6.8K 0.5% 1/10W
R831	1-208-462-61	METAL GLAZE	10K 2% 1/10W
R861	1-216-035-00	METAL CHIP	270 5% 1/10W (AEP,UK)
R861	1-216-033-00	METAL CHIP	220 5% 1/10W (IT)
R862	1-216-035-00	METAL CHIP	270 5% 1/10W (AEP,UK)
R862	1-216-033-00	METAL CHIP	220 5% 1/10W (IT)
R863	1-216-035-00	METAL CHIP	270 5% 1/10W (AEP,UK)
R863	1-216-033-00	METAL CHIP	220 5% 1/10W (IT)
R864	1-216-035-00	METAL CHIP	270 5% 1/10W (AEP,UK)
R864	1-216-033-00	METAL CHIP	220 5% 1/10W (IT)
R865	1-216-029-00	METAL CHIP	150 5% 1/10W (AEP,UK)
R865	1-216-025-91	METAL GLAZE	100 5% 1/10W (IT)
R866	1-216-035-00	METAL CHIP	270 5% 1/10W (AEP,UK)
R866	1-216-033-00	METAL CHIP	220 5% 1/10W (IT)
R867	1-216-035-00	METAL CHIP	270 5% 1/10W (AEP,UK)
R867	1-216-033-00	METAL CHIP	220 5% 1/10W (IT)
R882	1-216-295-00	METAL CHIP	0 5% 1/10W (AEP,UK)
R883	1-216-295-00	METAL CHIP	0 5% 1/10W (IT)
R884	1-216-041-00	METAL CHIP	470 5% 1/10W
R885	1-216-109-00	METAL CHIP	330K 5% 1/10W
R886	1-216-049-91	METAL GLAZE	1K 5% 1/10W
R887	1-216-049-91	METAL GLAZE	1K 5% 1/10W
R888	1-216-049-91	METAL GLAZE	1K 5% 1/10W
R889	1-216-049-91	METAL GLAZE	1K 5% 1/10W

Ref. No.	Part No.	Description	Remark
		< SWITCH >	
S801	1-762-141-12	SWITCH, KEY BOARD (WITH LED) (OFF)	
S802	1-762-141-12	SWITCH, KEY BOARD (WITH LED) (TUNER)	
S803	1-762-141-12	SWITCH, KEY BOARD (WITH LED) (AF/TA)	
S804	1-762-141-12	SWITCH, KEY BOARD (WITH LED) (CD)	
S805	1-762-141-12	SWITCH, KEY BOARD (WITH LED) (SENS/BTM)	
S806	1-762-141-12	SWITCH, KEY BOARD (WITH LED) (PTY)	
S807	1-762-141-12	SWITCH, KEY BOARD (WITH LED) (DSPL)	
S809	1-762-141-12	SWITCH, KEY BOARD (WITH LED) (LEVEL -)	
S810	1-762-141-12	SWITCH, KEY BOARD (WITH LED) (SEL)	
S811	1-762-141-12	SWITCH, KEY BOARD (WITH LED) (LEVEL +)	
S812	1-762-141-12	SWITCH, KEY BOARD (WITH LED) (LOUD)	
S813	1-762-141-12	SWITCH, KEY BOARD (WITH LED) (MUTE)	
S823	1-762-141-12	SWITCH, KEY BOARD (WITH LED) (DISC -)	
S824	1-762-141-12	SWITCH, KEY BOARD (WITH LED) (DISC +)	
S825	1-762-141-12	SWITCH, KEY BOARD (WITH LED) (SEEK +)	
S826	1-762-141-12	SWITCH, KEY BOARD (WITH LED) (SEEK -)	
S827	1-762-141-12	SWITCH, KEY BOARD (WITH LED) (6)	
S828	1-762-141-12	SWITCH, KEY BOARD (WITH LED) (5/D.SCAN)	
S829	1-762-141-12	SWITCH, KEY BOARD (WITH LED) (4)	
S830	1-762-141-12	SWITCH, KEY BOARD (WITH LED) (1/INTRO)	
S831	1-762-141-12	SWITCH, KEY BOARD (WITH LED) (2/REPEAT)	
S832	1-762-141-12	SWITCH, KEY BOARD (WITH LED) (3/SHUFFLE)	

MISCELLANEOUS

F781 1-532-982-11 FUSE (BRADE TYPE) (AUTO FUSE)(15A)

ACCESSORIES & PACKING MATERIALS

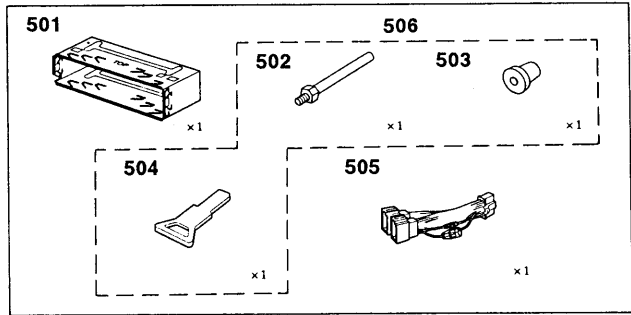
X-3367-795-1 CASE ASSY
3-856-020-11 MANUAL, INSTRUCTION
(ENGLISH,FRENCH,GERMAN,IATLIAN)
3-856-021-11 MANUAL, INSTRUCTION
(ENGLISH,FRENCH,GERMAN,IATLIAN)
3-856-021-21 MANUAL, INSTRUCTION
(SPANISH,PORTUGUESE,DUTCH,SWEDISH)
3-856-021-21 MANUAL, INSTRUCTION
(SPANISH,PORTUGUESE,DUTCH,SWEDISH)

HARDWARE LIST

#1 7-621-772-10 SCREW +B 2X4
#2 7-685-794-01 SCREW +PTT2.6X10
#3 7-621-773-95 SCREW (2.6X6) (BZN), +PTT
#4 7-685-106-19 SCREW +P2X10 BZN - N

Ref. No.	Part No.	Description	Remark
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MOUNTING HARDWARE



* 501	3-916-161-01	FRAME, FITTING
502	3-386-828-01	SCREW, FITTING
503	3-349-410-01	BUSHING
504	3-388-078-01	KEY
505	1-776-527-31	CORD (WITH CONNECTOR) (ISO) (FOR CNP781)
506	X-3370-077-1	SCREW ASSY (AE.KEY), FITTING